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GLEANINGS

A JOURNAL DEVOTED
TO BEES AND HONEY
AND HOME INTERESTS.

BEE CULTURE

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No. 23.

STRAY STRAWS

FROM DR. C. C. MILLER.

CELLARED my bees Nov. 13. Oh, but they're heavy!

LOTS OF FUN dreaming over what big things the bees will do next year.

SHALL I HAVE the pleasure of meeting you at the Chicago convention, Jan. 9, 10? [Yes.—Ed.]

WILL THE URBANE EDITOR of GLEANINGS kindly inform me whom I am likely to meet from Medina at the Chicago convention? [E. R. R. expects to be present.—Ed.]

NEVER FORGET that bees can stand more cold with good air than with bad. So can you or any other animal.

THE LINDEN, according to an article in Gravenhorst's *Bienenzeitung*, yields well only about four times in 26 years. Better get some American lindens.

FORMER ENTHUSIASM will come back through the meat diet, says Ernest, page 861. If some people only got their former enthusiasm they wouldn't be very enthusiastic.

FOUNDATION with wood base $\frac{1}{8}$ inch thick is favorably mentioned in Gravenhorst's *Bienenzeitung*. For extracting it has the advantage that no wire cloth is needed in the extractor.

PART OF MY BEES will be wintered in cellar this winter, the rest outdoors. Number in cellar, 157. Number outdoors, 1. [Fudge! only one outdoors? Why don't you try more?—Ed.]

THESE STRAWS are shipped from the Illinois State Bee-keepers' convention at Springfield, some being written in the \$4,500,000 capitol building. Small attendance, but lively interest.

WHY IS IT that bees get lazy in a little while when working on feeders, and keep up a life-long interest in flowers? Would they keep the same interest in the feeders if they traveled the same distance to them?

W. K. BALL, p. 864, wants his frames to

"stick" together so he can handle colonies by the hive. But if I can have my frames solid without any "stick" I don't want any "stick" in mine.

I'M NOT GOING to California. On p. 862 it is stated the average annual yield for 20 years is 7 pounds! Now, don't tell me that "70 pounds" was in all copies but one. I'm reading Mr. W. J. Finch's copy.

GRAVENHORST says that a box-hive man, or, rather, a straw-hive man, from 50 colonies took 5400 pounds of honey and 60 pounds of wax, and increased to 200. Then he naively remarks, "Pity that such cases are so rare."

THAT SERIES OF LESSONS now running in the *Southland Queen*, mentioned p. 865, is good, and is copied from the back numbers of the *American Bee Journal*. [This is a surprise. We turn to the Atchleys for a reply to this charge.—Ed.]

GRAVENHORST cherishes some hope that apis dorsata may yet prove an acquisition. He thinks there is not so much dissimilarity between it and the common bee but that a cross is possible. [Frank Benton says it is impossible.—Ed.]

ROUND STEAK, according to p. 861, comes, not from the shoulder, but from the "flank." What kind of "round" do you have in Medina, anyhow? Didn't you mean you get it from the "shank"? [That was a typographical error; it was corrected.—Ed.]

ALTHOUGH BEES are in cellar, I expect to keep doors and windows open day and night for some time—as long, anyhow, as keeping them open doesn't bring the temperature of the cellar below 40°. When it goes below that I'll shut up and keep at 45° or more.

HEATHER HONEY is so thick that as yet it has never been emptied by the extractor. One of the live questions at the present time in Germany is as to some machine or management by which it may be extracted, and the sturdy bee-keepers of that land are hopeful.

WHO FIRST INVENTED inoculation, or the plan of transferring a worker-larva to a queen-

cell? Pastor Weygandt, of Germany, practiced it in 1879. Was it known as long ago as that on this side the water? [We practiced it as early as 1880, I remember.—Ed.]

BADLY CHANGED. "Why, my dear Schultz, how are you? I haven't seen you for so long! but, dear me! how you have changed!"

"Excuse me; my name is not Schultz."

"My gracious! has your name changed too?"

DZIERZON, the German Langstroth, who invented movable combs in Germany, never allowed the advisability of end-bars and bottom-bars until the advent of the extractor. He used merely a top-bar; and when he wanted to remove a comb he cut it away from its side attachments with a knife.

THE BEE-KEEPER'S YEAR, says Lebrecht Wolff, in Gravenhorst's *Bienenzeitung*, does not begin in spring, nor Jan. 1, but Oct. 1. That's when I start a new record-book each year, and about the first entry is hauling home the bees from the out-apiary. Each volume of *Deutsche Illustrierte Bienenzeitung* begins, not Jan. 1, but Oct. 1.

TEMPERATURE alone will not decide when bees will fly. If badly in need of a flight they may fly at 40°, whereas they might stay quietly in their hives at 60° if there were no pasturage and they had not been long confined. They'll fly at a lower temperature in bright than in cloudy weather; and when honey is yielding than when nothing is to be had.

I WONDER WHY it is that in Germany heath-er honey brings lower price than clover, and in Scotland higher. [It's all in the taste, doctor. Some people think Limburg cheese very delicious, and others can't bear to have it in sight. But, say; in York State there are not a few who think buckwheat honey far superior to any white honey ever produced.—Ed.]

SWEET CLOVER. On page 846 the footnote says my failure with that piece of sweet clover was because "the seeding was too heavy." You're off, A. I. Not a plant was crowded. I've the rankest kind of growth this year, with heavier seeding; but the seed this year was *plowed under*. The failure was in soft ground, with shallow seeding, and the young plants shaded with a crop of oats—a bad combination.

AUSTRALIAN BEES have been successfully taken to England. An account in *British Bee Journal* says they are about one-third the size of the common house-fly, and they seem to be of value only as a curiosity. Can't sting, but bite, and die at a temperature below 50°. [They are probably much the same as our stingless bees of Mexico and the West Indies.—Ed.]

BOTTOM-BARS of wire have lately been mentioned as something new. I find them spoken of by Dzierzon, in 1875, as the invention of a

Danish bee-keeper. Dzierzon favored the use of wire for both bottom-bars and end-bars for extracting-combs. [I should rather suspect that the wire would prove to be no barrier—the bees would build the combs right past them as if they were not there at all.—Ed.]

AS LONG AS 20 years ago, unqueening colonies during the honey-harvest was practiced in Germany. I think it has gone out of use now. Dzierzon questioned the good wintering qualities of a colony that had been unqueened. [It is practiced to a considerable extent in York State, and with good results. One of our neighbors unqueens just before the harvest, and pronounces it a success; but it is a "lot of work," he says.—Ed.]

DO LAYING WORKERS put more than one egg in a worker-cell? They put several in a drone-cell, and a whole pile in a queen-cell; but I don't remember seeing more than one in a worker-cell. My assistant thinks, however, that I forget. When no drone or queen cells are present I've seen them make as regular work as a queen. [I think your assistant is right. I am quite sure I have seen a plurality of eggs from laying workers in a worker-cell.—Ed.]

IF ANY ONE knows any objection to having end-bars and bottom-bars the same width as top-bars, with $\frac{1}{4}$ -inch space between, will he please arise and state the objection? [It would be all right to have end-bars the same width as top-bars; but bottom-bars I should not want to exceed $\frac{3}{8}$ inch in any case. About $\frac{3}{4}$ inch wide by $\frac{1}{4}$ inch thick seems to give us the best results. If narrower, the bees build the combs, in some cases, clear past them, and fasten on to the next set of frames below! If wider than $\frac{3}{4}$ inch, there is almost sure to be a useless bee-space between the bottom edge of the comb and the bar. Unfortunately there is no width or thickness that obviates completely either of the above-mentioned difficulties.—Ed.]



THAT MOOTED HIVE QUESTION.

A CLEAR STATEMENT OF THE CONDITIONS UNDER WHICH THE EIGHT-FRAME LANGSTROTH MAY OR MAY NOT BE LARGE ENOUGH.

By R. C. Aiken.

Much has been written about "the best size of hive." Some of it has been guesswork, or at least without any clear conception on the part of the author. It is not enough to know that a few eight-frame hives, as compared with an equal number of ten-frame, or *vice versa*, gave more surplus than the other.

First, the hive must be large enough to hold sufficient stores and accommodate the colony. To illustrate: Here we have no honey to speak of from July or August till June. Sometimes September will give a living, and sometimes not. At times in April and May a little is gathered and at once used, but *never* added to store. The bees will fly more or less every month, and much in fall and spring, and breeding must start early to keep up the colony, or they perish in early spring from lack of numbers. In March, April, and May, and usually the first half of June, brooding goes on as rapidly as the strength of the colony will permit, provided the old stores are abundant, consuming much honey. I count on about 40 lbs. average as necessary, so that, as a rule, an eight-frame hive is not large enough unless *solid full* of honey—no empty combs on which to cluster. So we must use a ten-frame hive, or carry a stock of feed for use in the spring.

The flow here opens about June 15th to 25th. In five years with from 150 to 300 colonies I have found that I can not get an average of more than about six to seven combs of brood by June 15th; though with care to have all queens good we no doubt might average seven or better. Some colonies with feeble, poorly bred, crippled, or aged queens will get but three to five combs of brood, while the best queens will get seven to nine combs full. Shortness of stores, or scarcity of bees to care for brood, will also cause the colony to fall short in amount of brood. So, with good wintering and plenty of stores, we can count on having six to seven combs of brood June 15th; and as a few queens will do extra, filling eight to ten combs, the eight-frame would not be large enough unless we took from the strong and gave to the weaker.

I have no doubt that where 20 to 30 lbs. of old stores is sufficient for winter and spring, and where the brood is equalized by the apiarist, that the eight-frame hive will do very well. Nor do I doubt that the smaller hive will increase the disposition to swarm in general. If there has been a complete dearth of honey from the fields, and if the stores are well consumed and the colonies strong, the large hive will be first to swarm because it has the most old honey; but if all have *plenty of stores*, the small hive will cast swarms first.

I contend that the large hive, with its abundance of honey, will bring the largest colony. One condition, however, will make the small hive equal to the large in the quantity of bees reared; and that is, a constant supply of nectar coming in, sufficient to keep up the needs of the colony. Talk as we will about size of hives, and feeding, one thing is certain—if we get the best results in breeding we must not stint the colony in stores; and the locality that will not furnish it from the fields must fall back on old stores or the sugar-barrel.

Now, according to the foregoing it appears that in *poor* to *fair* seasons for brood-rearing, the eight-frame hive will accommodate all brood and necessary stores when a living can be had from the fields from four to six months of the year. In fair to good seasons for brooding, the apiarist may need to *equalize* brood to give the best queens room, and some colonies may breed so much that a shortage of nectar may put the colony in a starving condition, which, if it occurs *any time* within six or eight weeks of the opening of the flow, ruins that colony for that flow. The hive that is big enough one season may not be the next.

The rapidity and duration of the flow also has a bearing on the question. Whether the hive be large or small, if it be full of bees we expect good work. Should the flow be slow and "long drawn out," i. e., thirty to sixty days, a contracted hive will *force* the bees to the sections sooner (this does not apply to those run for extracted unless they have their combs to build), and will result in more section honey, while the brood-chamber will be filled with brood to the exclusion of winter stores; and, in case of extracting with full sets of combs, will leave the colony with nothing but brood and bees. If the flow comes with a rush, there will be but little difference in the quickness with which they enter the sections, and little difference in the total yield. The difference will be mainly in the amount of the extra combs in the brood-chambers, *provided, however, these combs were empty when the flow came; and if they were empty, there must have been more honey converted into bees in the large hive*, consequently more honey gathered.

Here, the difficulty is not in the hive being large enough in which to rear a strong colony of bees, for I can not get an average of over six to seven combs of brood by the harvest time, but the constant danger of short rations at the most critical time. The small hive will hold the brood, and the bees can pile on the outside. If eight frames of stores and the incoming nectar will *surely* keep the colony from *even feeling the need of economizing*, it is large enough to give good results; but if it will not do this it is too small.

IMPORTANCE OF STRONG COLONIES UNDER ALL CIRCUMSTANCES.

Some write as though a colony could get too strong. How it is possible to get one too strong without doubling, I can not understand. I know that, in poor seasons, only strong colonies will do well, even in getting winter stores. In a *fair* season the strong colony will outstrip the average colony; and in a *good* season the strong colony must certainly do the best, for surely two pounds of bees can and will gather more honey than one pound. I have never been able to believe that apiarists are able to get colonies so strong that they refuse to work.

I admit there is a little more energy in proportion to numbers when the energy is necessary to get the brood-nest into shape; but this does not apply to the colony already in prime strength. I can always get more and better work in the sections when I have colonies so strong that they *must* occupy the super. If the flow comes very freely while it does last, we do not notice it so much; but when the gain is one to two, and even three pounds a part of the time, per day, it is almost impossible to get *even reasonable* work in sections with a colony that has *not* swarmed; while the one that swarms will do almost nothing in sections; but two colonies put together in one hive—the bees and enough brood to fill the hive) will do fair to good work. This year our flow began June 20. My scale-hive colony was stronger than the average, and was not allowed to swarm. It is a ten-frame hive. The gain from June 20 to July 15 (the extent of the flow) was an average of $2\frac{1}{2}$ lbs. per day. The best day's work was 6 lbs. This colony gave about 25 sections. Many other average colonies in nine-frame hives, and a few in eight-frame, gave from nothing to about one¹ super, the majority not giving ten good sections. In one case I put the force of two colonies in one nine-frame hive, and got two 28-section supers. Another colony on nine frames had the forces from two other colonies added, and gave three 28-section supers. All the evidence goes to show that, if I had *doubled the forces* of all, preserving the old stock in the original hives, I should have had as many colonies in the end, and about doubled my surplus.

I could also have doubled the surplus by contraction, but at the expense of stores which I *must have*. In twenty years of practice, in which I have always kept at least a part of my colonies from swarming, that I might have the advantage of the strength, I am as firm as ever in the belief that we can not get our colonies too strong. A very strong colony *may* do as well, and *sometimes* a little better, when in two average hives, if the flow be very good, coming in very rapidly; but in a slow and moderate flow, the stronger the colony the better the results.

The apiarist who has intelligence enough (knowledge of the business) to know how much brood he can get by the opening of the harvest with *plenty* of feed within and without, will know the size of hive he needs. The small hive will the more often fail *because of shortness of stores* than will the large one because of *too much room* for storage in the broad-combs.

Loveland, Col., Nov. 11.

EIGHT-FRAME HIVE FOR WISCONSIN.

WHY IT IS LARGE ENOUGH, AND WHY BETTER THAN THE TEN-FRAME SIZE.

By F. L. Murray.

Mr. Editor:—I see you ask in your Nov. 1st issue for bee-keepers to give you the size of hive they are using in their locality, in order to make a map showing where different-sized hives are used. I have been keeping track of the hive discussion with great interest, and I think the map scheme would be a good thing, as it would give a better idea than any thing else yet spoken of in regard to large or small hives, as I believe the location has more to do with the hive question than any thing else.

In my location I do not want any other hive than the eight-frame Dovetailed. I have been using them for a number of years, and, until I see something more definite than has yet been published in favor of the ten-frame (or larger) hive, I will continue to use the eight-frame. By preferring the smaller hive I do not claim that eight frames give sufficient room for all queens, for I have had queens that would keep twelve and fourteen frames full of brood, so you see a ten-frame was not large enough.

Now, in working for comb honey (and I work almost exclusively for that), I put a second hive-body, full of drawn combs, about May 1st, on all strong colonies. That makes a sixteen-frame hive, and (I have had no trouble about queens refusing to go up into the upper story when crowded for room below) that gives all colonies a chance to build up strong for the honey-harvest which begins here about June 10, from white clover. At the beginning of the honey-harvest I take off all those second stories. I fill up the under story, or hive proper, with brood, of course being sure the queen is below; and if there is any more brood than will fill up the hive I strengthen up weak colonies with it, or make increase. In this way I confine my working force on eight frames; and by putting on the surplus-arrangements as soon as the second story is taken off I always get my share of the honey if there is any to get. I do not want any larger hive than the eight-frame, for comb honey, for eight frames give all the brood room I want after putting on the surplus-arrangement; and if I used a larger hive I should have to use dummies; and I do not like to use them, for various reasons. I also find, when wintered in the cellar, the above hive gives all the room necessary for winter stores; and an eight-frame hive full of bees makes a *pretty strong colony*, and the eight-frame hive is much handier to lift in and out of a cellar. When bees are kept where the person keeping them has too much other work to do to attend to them properly, I think a large hive would be preferable; but for a practical bee-keeper who

If you would like to have any of your friends see a specimen copy of *Gleanings*, make known the request on a postal, with the address or addresses, and we will, with pleasure, send them.

understands the proper manipulation of bees, the eight-frame hive is about right here.

Calamine, Wis.

[You and friend Hatch do not agree, although you are both of the same State. You will remember that, in the first place, I too, in answer to him, took the same or nearly the same position in favor of the smaller hive. While locality has much to do with this question, it is evident that the individual tastes and preferences of men, even in the same locality, have much to do with it also.—Ed.]

AN OPEN LETTER TO DR. MILLER.

THE QUEEN THAT SULKED; HOW TO GET
QUEENS TO OCCUPY ONE OR MORE
STORIES.

By Delos Wood.

Dr. C. C. Miller:—I have just read your article on page 739, Oct. 1st GLEANINGS. In your closing paragraph you intimate, as usual, that you "don't know," and ask for more light. Perhaps I can lend you a candle for a few minutes. You complain that, when you took the queen out of the story she was laying in, and confined her to another with empty combs, she "sulked and would not lay." Now stop right here and think what you did, and then, instead of blaming the queen for "sulking," you will probably ask Miss Wilson to make you a paper cap such as I had to wear sometimes in my schooldays.

When you changed your queens you took them away from the *nurse* bees, and left them with only the old field-workers, and the queens were *compelled to sulk*. Next year, when you want to put the queen in confinement, take two combs of unsealed larvæ with the adhering bees, and put them into the story you put the queen in, and give them the other six combs empty; and if the queen *sulks*, send the paper cap to me and I will wear it.

At one time I thought I knew all about bees; but I have had 30 years' experience since then, and find, like yourself, I am compelled many times to say, "I don't know."

I work entirely for extracted honey, and tier up as many stories as may be required, always using the same-sized story and frames. I use loose hanging frames. My hives are 16¼ in. long, 13½ wide, 10½ deep, inside measurement. I use 9 frames with loose bottoms and tops. I always work them two stories high, and tier up more if unable, from any cause, to extract as soon as needed. My queens *prefer* the top story, and I have never had a queen that would fill more than two stories. Empty combs below will not prevent swarming in my "locality."

This season I have had two colonies with two laying queens in each. One of them I found in April, and they were still working side by side in September, and may be there now for all I know to the contrary.

NOT SIGHT BUT PROOF OF A QUEEN'S PRESENCE NECESSARY.

Miss Wilson objects to tiering up because it is harder to find the queen. What does she want to *see* the queen for? *Proof* of her presence is all I want. Queen-breeders, of course, will keep the queens for sale in a hive easy of access, but not so with the honey-producers. Of course, you will not expect her to lay in old combs that have been out of the hive all winter. Santa Barbara, Cal., Oct. 12.

[Dr. Miller replies:]

I don't know whether I'm willing to put on that cap or not. I have some doubts about it. Of course, anyone knows the queen will lay wherever two combs of unsealed larvæ with adhering bees are put. That's about equivalent to saying she'll lay in the brood-nest, for it's simply transferring a part of the brood-nest. But why won't she do it without the brood and adhering bees?

You say, when I changed my queens I "took them away from the nurse bees, and left them with only the old field-workers." Didn't either. I put the queen alone in the empty chamber above, without any bees, an excluder between. There was nothing to hinder the nurse bees going up any more than the fielders. The bees did go up, plenty of them, and for days that queen stayed up there sulking with the chamber full of bees. Now do you know that those bees that went up were all field bees and not nurse bees? What call have worker bees to go up into an empty story any more than nurse bees? Isn't it rather the other way? When the bees go up of their own accord to enter the surplus-chamber, is it the field bees or the nurse bees that go up first?

It looks a little as if the bees had said, "There's no nectar coming in, and we'd best do nothing in the way of enlarging the brood-nest." But when the brood had hatched out below, why did they remain without any brood rather than start in a new place? Would they not have acted differently if honey had been yielding?

If Miss Wilson has any good reason for wanting to *see* queens, she can give it herself; but you know that women are generally supposed to have a great deal of curiosity.

C. C. MILLER.

[There is one point in the last paragraph of friend Wood's letter that I am interested in. It is not new, but it is one that needs far more attention than it usually receives; viz., accepting the proof, as friend W. puts it, of a queen's presence, rather than going to, oftentimes, a large amount of trouble to get a view of her. I never think of looking for a queen (and I don't suppose Miss Wilson or the doctor does either) when I have seen one good comb with brood and eggs, properly distributed. Beginners, and perhaps some of the veterans in some cases, knock quite a little slice off their profits from honey by hunting for queens when it is not necessary. Of course, there are times when it is

necessary; such as, for instance, wing-clipping, superseding for the purpose of introducing, or raising another queen.—ED.]

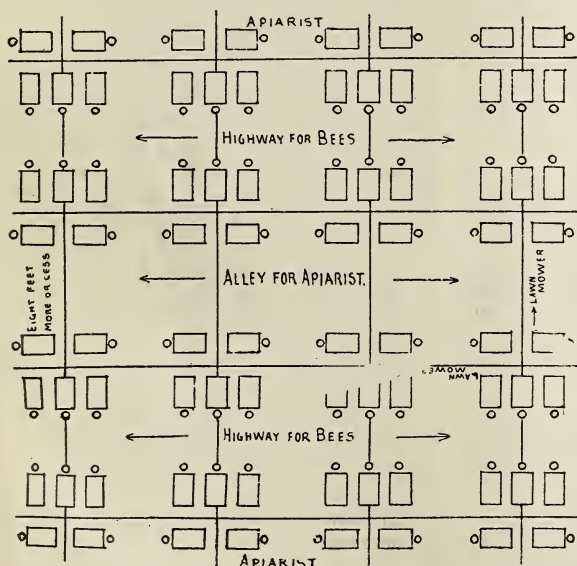
NUMBERING HIVES.

INVISIBLE NUMBERS; THE GROUP PLAN OF S.

E. MILLER.

By S. E. Miller.

Friend Root.—Seeing so much said, lately, through the bee-journals about numbers for hives, it has caused me to offer my method, which is without numbers of any kind, except those kept in my head, and I do not think these are made of tin, manilla paper, or any other similar material. I did not know, however, that others were using a similar system to my own until I saw in the *American Bee Journal* for Oct. 31 the plan given by R. V. Sauer; and this evening, in looking over the editorials in *GLEANINGS* for Nov. 1, I notice what you say in reference to what E. E. Hasty had to say in the *Review* regarding hive numbers and toads' tails.



S. E. MILLER'S PLAN OF AN OUT-APIARY.

My method is not exactly like Mr. Sauer's, Mr. Hasty's, or Mr. Boardman's, and yet similar to all. Mr. Hasty numbers his groups, while I think letters for the groups are preferable. But without further preamble I will give my method.

If the reader will refer to page 21 of the A B C of Bee Culture he will see the S. E. Miller plan of an apiary. This plan was first given in *GLEANINGS* about five years ago, but I can not tell the exact year and number without overhauling a pile of back numbers.

Probably the editor could help out here at giving the number, or he might have a cut of the plan lying around the shop somewhere, with which to illustrate it if he considers it worth the trouble.

The hives are arranged in groups of 5, so that, for an apiary of 80 colonies, it will take 16 groups. We will say we stand on the south side of the apiary, and, facing it, we will call the southwest group A; and, going east, B, C, D, in succession. The first group on the west end of the second row is E, and so on throughout. Each group having 5 hives, the numbers run from 1 to 5. Thus, facing a group and looking north, the southeast hive of the group is 1, and the northeast group is 5. So the hive that occupies the third position in the third group is C3. It does not matter whether I am at home or abroad, that particular position of the apiary is where C3 belongs, and it doesn't have to have a big tin tag nailed fast to it either. And now see here, Mr. E. R., you may be older than I am, and know much more; but I'll bet you are not any bigger; and if you think you can put us fellows, who prefer to

carry our hive-numbers in our heads, aside by a wave of the hand, or even by a six-inch editorial, you are mistaken.

And now let us see what we have to say in favor of numbers in the head as against numbers nailed to the hives.

First, it is obvious that the stand and not the hive should bear the number. If No. 10 is here to-day, you do not want to look away over yonder for it to-morrow, which would be the case if No. 10 should swarm and you wished to remove the parent colony to a new stand, and hive the swarm where the parent colony stood, unless you should pull off that number (that you ought to have in your head) from the parent colony and nail it fast to the hive, and then go and get a new number for the parent colony. Certainly, for those who winter in cellars a number is

necessary if one wishes to have each colony occupy the same stand in the spring that it was taken from in the fall; but these numbers need be only temporary, and a piece of blue or red crayon would do very well to mark the hives with while they were in the cellar.

Second. These numbers are always where they belong; and if the apiary is laid out in any thing like order they are as stationary as the lot on which your house stands; while numbers, if hung on a nail driven into the hive, are liable to blow off and get lost in the grass;

or, if nailed or tacked on, they must be pried off and nailed to another hive whenever it is necessary to change a hive from one stand to another; and we all know that such changes are frequently necessary, especially in swarming-time.

In that editorial you say, "But suppose he hired help, and he should direct his man, not very familiar with the arrangement, to 16-9." I will tell you how I would direct that man. If I wished him to get the queen from G5, and he had never seen the apiary, I would say, "Go to the apiary. Go in at the south door of the honey-house. When you get in, turn to the right, and look at the plan of the apiary tacked to the wall just beside the door. After looking at it a minute or two, if you can not locate G5 come and tell me and then go home.

What I claim for my method is that one letter and one figure indicate the number, there being no number higher than 5. Some may argue that having the same numbers so often is likely to cause confusion in keeping the records; but I find in actual practice it is not the case. One is not likely to mistake one letter for another; and bearing in mind that the southeast hive in each group is 1, and that the numbers go round like the hands of a watch, there is little likelihood of getting the numbers wrong. Let me give a sample record. I have not my book at hand, so will give you a sample from the same place that I carry my hive numbers.

H3, Mar. 15, strong, plenty of stores; May 28, swarmed; hived swarm here, and removed parent colony to L4; June 20, gave super.

By referring to the record of L4 we shall see where they came from, and will know that the queen is a daughter of the queen in H3; if all went well, we shall know she was reared by natural swarming; her age, etc.

Now let that other Miller tell us why he would have his big tin numbers nailed to the hives instead of carrying them in his head.

Bluffton, Mo., Nov. 4.

[We have reproduced the diagram in the A B C, for the convenience of our readers. Well, while I have no doubt that you can get along without the visible numbers, can't see what harm their presence on the hive or in the group can do, and it might be a great convenience. Why, it would save having a diagram or plot "tacked to the wall just beside the door." Then some chaps whom you might send there might commence numbering from the wrong side or end.

As to our own practice, we have never numbered our hives; but we had seriously thought of doing so, because it was inexpensive, and might be an advantage.

Perhaps it would be well to state that we have been using the Miller plan of grouping hives, in one of our yards, for several seasons. We like the arrangement very much. It economizes space, gives an alley for bees and one for the bee-keeper; and then, too, one hive makes a handy seat for working over its neighbor.—Ed.]

RAMBLE NO. 144.

A SKETCH OF HARRY E. WILDER.

By *Rambler*.

During the past few months I have made quite free use of the name of my traveling-companion; and to atone, in a measure, for the jokes I have thrown at him I will in this ramble present him to your readers in the character of a progressive bee-keeper.

Harry E. Wilder was born about 28 years ago in Peterboro, N. H. His father has for many years been a manufacturer of thermometers; and any reader of this who owns a Wilder thermometer has the best and most reliable mercury-tube in existence—at least, Harry so insists. Thousands of thermometers are turned out of the factory, and for all conceivable purposes.



HARRY E. WILDER.

Harry lived under the paternal roof, with several other chips from the old block, male and female, until he arrived at the age to which all young men look forward with longing. At his majority he started out to experience the ups and downs of life among strangers and under new surroundings.

From early life our friend was an ardent lover of the chase, and his gun and hounds were familiar features on the streets of Peterboro. It may be readily surmised that the "hunting" around Peterboro was not of a wide and varied character; and a lover of such sport, when the opportunity came, would naturally seek the wild portions of our far western country, where both large and small game is plentiful.

In the interests of an eastern publishing company our friend found his way to the Pacific coast; and in Washington, Oregon, and California, when business cares were not pressing, the highest mountains and deepest canyons have been explored for game and natural wonders.

In 1890 he arrived in Southern California. Up to this time he had never been interested in the honey-bee. There were but few bees kept in his native town; and the few there were never attracted much attention from methods of management or from the yields of honey. He possessed the idea, common to a great many, that, the further he kept from a bee-hive, the better health he would enjoy. But in this land of sunshine he met with people who were making some money out of bee-management; and soon after arrival he was taken with a violent fit of bee-fever which did not cease its raging until he had paid \$400 for 100 colonies of bees. The person from whom he purchased the bees gave him his first instructions in management; and for a novice, and the first year, the results only opened his eyes to the fact that there are more things in bee-keeping than the average novice had ever dreamed or imagined, and his appetite for investigation was sharpened by his first year's experience. He became a subscriber to *GLEANINGS*, a student of Prof. Cook's Guide; and every bee-keeper, far and near, contributed to his knowledge, for he was not afraid to ask questions.

The apiary was located upon the north side of the San Bernardino Valley, near the mouth of Devil Canyon. Considering that Devil Canyon was not a good neighbor, the second year he changed his location to a series of rocky hills toward the south side of the valley, near Riverside. Here he found a canyon that fitted his name, "Wilder;" and as it was government land, and of no earthly use except for bee-pasturage, he took up a government claim and established himself near a beautiful spring of water, and here we find him to-day.

Mr. Wilder would disclaim any idea of being a scientific bee-keeper; but I think the name fits any person who manages his bees so as to secure the very best results from them and his field. As a step in line with scientific bee-keeping Mr. W. believes in managing only the number of colonies that he can thoroughly attend to; so he has never had less than the original number (100), nor more than the present number, 150.

In the early spring Mr. Wilder is in his bachelor cabin, believing in the old adage that "whatever is worth doing at all is worth doing well." The condition of every colony is investigated and noted.

The first essential to a good honey-yield is a vigorous queen. Nuclei are started as early as the season will permit, which here is in the latter part of February or early March. The queen-rearing is performed according to the Doolittle plan, and the nuclei are kept going through the whole season. Any queen that becomes superannuated, or fails to deposit eggs with due rapidity, is killed, and a young vigorous queen introduced in her place.

The next point is to give the queen ample room to deposit eggs. This line of work finds the hives just boiling over with workers as soon as the honey-flow opens. The results from close attention to these few little details are usually good; and during the past season the apiary of 120 has been increased to 150, and 17 tons of honey secured, or 283 lbs. from each of the original 120 colonies. It is also safe to say that two or three tons more could be taken from the apiary, without detriment; but Mr. W. is very provident in giving abundant stores for wintering. The honey does not spoil in keeping over till another season; and the plan two years ago enabled the apiary to pull safely through the poor season of 1894 with but a trifling loss.

The hive used in this apiary contains a frame the measurement of which, speaking in round terms, is 10 inches deep and 14 in length. He has a few which contain 13 frames, and I think he is partial to the jumbo idea; at least, when he saw a few Heddon hives in my embryo apiary he wanted to know what I expected to do with "those pumpkin-seed hives."

Mr. Wilder is anxious to find out whether bee-keeping as a pursuit can be made a paying business when worked independently of other pursuits. The success of the present season gives some encouragement that it may be made a paying business so far as production is concerned; but in the matter of prices the California bee-keeper labors under an immense disadvantage; and I think that in this alone is found the great Nemesis against the highest success on this coast.

If we step inside of Mr. Wilder's cabin we find many specimens of his handicraft as a taxidermist. A wildcat stares at us from a corner of the room, while several wildcat skins and a coyote skin are doing service as rugs, etc. Owls, hawks, and an endless procession of rare specimens of the feathered world stare at us with glass eyes.

Mr. W. is something of a literary man, having written up our last season's journey in fine style for the local paper at his old home in Peterboro, N. H. He might give some interesting articles to the bee-journals, but seems to be somewhat modest in relation thereto.

Upon the whole, the success of Mr. Wilder shows what a young energetic man can do here in the bee-business, with a very little capital; and if there are any young men in the East who contemplate migrating to this sunset land, please consider the above facts, and do not forget the capital and the energy.

[I sincerely wish our friend would write occasionally for these pages. If the article he did send us some time ago is a fair sample of what he can do he is one of the brightest, spiciest writers that ever wrote for *GLEANINGS*. There, there! I don't mean this for "taffy" or a "bait" to draw him on; but a bee-keeper of



KOLBE END
MAY 10, 1900

his all-around talent, and the success which has been his, should let his light shine.

By the by, he has an interesting history; but there is only one thing lacking to make it round and complete—a—dare I say it?—some fair Eugenia who would make that wild canyon fairly blossom, and Wilder the happiest man on earth.—ED.]

ENTRANCE FEEDERS.

THE BOARDMAN AN OLD IDEA; SHADE, AND ITS EFFECT ON THE TEMPER OF BEES; A QUEENLESS COLONY RECOGNIZED BY THEIR NOT CARRYING IN POLLEN, ETC.

By E. H. Schaeffle.

About twelve years ago I purchased of Mr. C. F. Muth a feeder made from the Mason jar, screw top. The top was cut out, a piece of finely perforated metal soldered on, and a rim an inch deep soldered on. This made a good feeder if the jar, when first inverted, was placed over some receptacle until sufficient vacuum was created to cause the honey to feed slowly. Wishing to feed at the entrance, I made a thin box with tin bottom, and projecting strips at the open end. The top was of wood, with circular holes a little smaller than the rim on the feeder. The half-gallon Mason jar was inverted, placed over the hole on the top of the feeder, and it took care of itself. This did very well for hives having a wide entrance. I believe this is about the same as the Boardman feeder.

By the way, Mr. Boardman claims that, with a square hive, the queens won't go up into the sections. I have 140 square Gallup hives; and unless prevented with queen-excluding zincs the queen goes to the top super almost every season. I extracted several hundred sections of that kind last season, and had a few left to show Rambler when he was here. This season I find the queen would have done the same as in the few hives without zinc. The sections are full of brood. The queen does not wait for the cells to be drawn out, but lays her eggs as soon as the cup is deep enough to hold them. Where the flow of honey is limited or short, there may be no trouble of this kind. Shutting a queen up in sections, during a poor season, and not finding any eggs in the sections, proves nothing. The chances are that she would not have laid in the brood-nest, as she and the bees don't start a family when there is a doubt about its support.

Mr. Muth-Rasmussen once stated that bees are better-natured in the shade, and his statement was poo-hooded. A neighbor had an apiary that made the life of himself and family a burden. They were the most vicious bees I ever saw, and were a constant annoyance to me as well, so I bought them. He had them out in the sun, without any shade. I placed them in the shade of a row of apple-trees, within a few feet of a public sidewalk, and in the shade they

are as gentle as any bees I have. Eastern apiarists should remember that conditions with us are entirely different from the East. If they could stand their bees and themselves out in the heat when the thermometer registers 112° in the shade they'd soon find both the bees and themselves changing their angelic dispositions.

I stated last season, that, in the early spring, a queenless colony could be told by their not carrying in pollen. I made that statement after an examination that, in every instance, proved I was correct. Some of the bees were late fall swarms. In their combs there was *no pollen*; others were old colonies whose combs were full of old pollen from want of young bees to feed it to. When Rambler was here I showed him a drawing of a twelve-frame hive that I had made several years ago, and talked over its construction with him. He said:

"Look out for Heddon!"

"Why?"

"Well, he claims a shallow divisible brood-chamber as his patent."

"Don't all bee-keepers allow the queen access to all the extracting-supers in her spring laying, and afterward confine her to the lower brood-chamber?"

"Yes."

"Well, if you'll go over here to Columbia, you'll find a bee-keeper who works all of his bees in 1-lb. supers, filling them all full of 1-lb. sections. It suits him but it wouldn't me;" and the last I saw of Rambler and Wilder they were headed for Columbia.

Now, there may be something in Mr. Heddon's hive that is patentable; but no one, certainly, can claim a patent on a hive because it is four inches or four feet deep. I have bought up all the bees in this section, and have a grand conglomeration of every shape, size, and style, from four inches to four feet in depth—box with cross-sticks, to the Dovetailed. All I want is an old-fashioned straw skep to gild and place on top of my bee-house.

This is my first season with the Coggs hall bee-brush. When once you get the hang of it you can brush down the bees as slick as a Pullman porter does your clothes. It's "way up."

The Manum swarmer is good; but in its absence I found that a light box, 8 in. deep, 18 in. long, 12 wide, with screw-eye and hook in one end, did finely. Wet the box thoroughly; brush in the bees, hang it on a limb or the ladder, and brush the remaining bees off their alighting-place. In a few minutes they will all gather into the box, and can be carried anywhere.

I trust the bee-men will keep up the agitation for a 50-lb. honey-can. In its absence I use a light block and tackle, which lifts the extractor up on to a table. When I wish to strain out the honey I pick up a can of it and drop it into a case as cleverly as Sandow could do it, and all without any strain on my part.

Bees with me are doing nicely. I shipped half a ton of this season's extracting, in the middle of April.

I notice that Mr. Crane states very plainly what he has been allowed a patent on. Will you give us a similar statement in regard to the Porter escape? I think a better one can and will be invented; but no one wants in any way to infringe on a just patent.

Sometimes since I suggested in GLEANINGS a system of transferring by drumming the bees up into a hive having at least one frame of brood, then placing a queen-excluding zinc over it, and the old hive over the zinc, and, when the bees had all hatched out, placing a bee-escape board under the old hive, and thus get the combs free of bees and brood. The idea was new to me; but I see since that it is the system used in France, which proves its value and previous use.

Murphy's, Cal.

[The principle of the Boardman feeder is old, and, indeed, I do not know that our friend has made any claims as to its being new. Yes, atmospheric entrance-feeders are quite old. In looking over our back volumes I find quite a number. In GLEANINGS for 1881 and '82 several were illustrated; for 1881, see page 477; for 1882, see pages 174 and 221; and, again, one was shown and illustrated on page 561 for 1891. But the one on page 174 for April, 1882, by A. C. Kendel, resembles the Boardman more closely than any other, and some might pronounce it almost identically the same thing. But Boardman's is the cheapest and the best of all, and of late I have seen quite a number of excellent testimonials from those who have tried it since we illustrated and described it on page 346, current volume. The lower part (see adjoining cut) is made of wood, and gives plenty of room for the bees to cluster around the lid, secure from outside intruders.



The following are the claims upon which a patent was granted to the Porters.—Ed.]

1. A bee-escape comprising in combination a body having an opening in its top to register, with an opening in the escape-board whereby it is adapted to communicate with the super and open it at its end to adapt it to communicate with the brood-chamber, said body providing a passageway between the super and brood-chamber, and a guard of spring metal arranged in said passageway with the movable portion thereof normally out of contact with the top and bottom of the passageway, and adapted to yield laterally to the pressure exerted thereon by the escaping bees, and by its resiliency to close the passage against their return, substantially as described.

2. A bee-escape comprising in combination a body having a passage whose ends open outside the body, and a spring guard-piece arranged in said passage, and having one end thereof secured to a flexible, inelastic part of the structure, and its opposite end free, whereby by bending said flexible part the free end will be adjusted to vary the size of the passage, substantially as described.

3. A bee-escape comprising in combination a body having an opening in its top to register, with an opening in the escape-board, whereby it is adapted to communicate with the super, and open at its end to adapt it to communicate with the brood-chamber, said body providing a passageway between the super and brood-chamber, and said passageway having placed therein a laterally yielding resilient guard-piece, the movable portion whereof is normally out of contact with all fixed parts of the structure, whereby clogging of the guard-piece with deposits made by the bees is avoided, substantially as described.

4. A bee-escape having a passageway adapted to communicate at one end with the super, and at the other with the brood-chamber, a spring guard-piece arranged in said passageway, and a chamber underneath the entrance to said passageway, and at a lower level than the floor of the passageway, whereby clogging of the passageway with dead bees is avoided, substantially as described.

5. A bee escape comprising in combination a passageway adapted to communicate at one end with the super, and at the

other end with the brood-chamber, and a guard of spring metal arranged in said passageway, and having one end thereof secured to a flexible inelastic part of the structure, and its opposite end free, whereby, by bending said flexible part, the free end may be adjusted to vary the size of the passage, substantially as described.

6. A bee-escape comprising in combination a supporting-plate having an aperture therein, a shallow open-ended metallic body secured to the under side of said supporting-plate, and forming a passageway, spring guard-pieces arranged therein, and an outer box-like body having one open end, and secured to the supporting-plate around the body containing the guard-pieces, and closing one end of said passageway, substantially as described.

JAKE SMITH ON ADULTERATION.

The other day me and Zed went into the store. They was a nice-dressed man a talkin to Nat Boucher, the man that keeps the store. The stranger had a sample of hunny he was a sellin, and Nat had just bin a tastin the hunny, and said it was 1st class, and he thot he mite try a few pounds of it. Besides the bottle he had the sample in, he had it in cans to sell. I mean the man had, not Nat. It had nice labills onto it, with pictures, and marked Pure Hunny. The stranger held it up to show how nice it looked, and was a tellin Nat how he could easy sell 1000 pounds of it, and just then Jim Short came in.

Jim listened to him reelin off his story for awhile, and then says he to the stranger, says he, "When you see hunny nowadays, you don't know whether it's hunny or not. How's a buddy to know whether that of yourn is the simon-pure juice of the posies or some of the city-made stuff?"

The stranger looked at him, and says he—he was a real pleasant-spoken man, and says he to Jim, "My friend, I'm afraid you've been reading some of the newspaper yarns. It shows you're a man of intelligence, and read the papers; but you mustn't believe all you read. That stuff about adulteration of hunny is all pure rot. There's nothing to it. Not a thing. Why, just think of it. I appeal to you as a man of judgment and discrimination, which I can see by you're appearance you're that sort of a man—I'm out in the world a good eel, and a man in my position learns to read character pretty well—I appeal to you if it's reasonable that men would buy glucose or any thing else to mix with hunny, when the bees furnish the pure article for nothing. Bees work for nothing, and board themselves; so a man would be a fool to try to make munny by mixin something with his hunny that would cost more than the hunny itself. No, sir; no one can afford to adulterate hunny. They wouldn't be any munny into it."

"Well, now," says Jim, "that does look kind o' reasonable; but supposin a man hadn't any bees, and bot glucose at 3 cents a pound, and then sold it at 10; it seems to me they would be some munny in it, even if he did mix some hunny with it. Fact is, you ain't sure of nothin bein pure nowadays. If I had my way I'd string up a few of the scoundrels. Hunt

out the men that mix glucose and hunny, and put 'em to the full extent of the law."

"That would only make matters worse," says the stranger. "Why, if it hadn't been for the everlasting clack of bee-keepers themselves they wouldn't be half as much said about adulteration. What good does it do to make such a fuss about it?—only makes folks suspicious. Come right down to it, what harm is there in glucose? It's a good wholesome article. And you can't tell it from pure hunny, so where's the difference? In fact, these men you come down so hard on are doing a good thing for bee-keepers. When it's a short crop they help to fill in and keep up the supply so people don't get out of the way of wantin' it."

"Stranger," says Jim, "may be you're right; but that's a kind of new way of lookin' at it. May be it would be better to keep things hushed up. If a lot of counterfitters gits up a lot of bogus dollars that common folks can't tell from the genuine, you think it ain't best to say any thing about it; but increase the circelation as much as possible. It would help to keep up the supply when munny is skerce. If you can't tell the bad munny from the good, where's the difference? Now, look here, stranger; I hain't much on readin' character by lookin' into a man's face, but you don't look like sitch a dog-goned fool as to believe the sort of stuff you're

round the counter at the cans of hunny which the stranger was a standin' with his back to them, and had been samplin' it with a little pine paddle; and just as Jim stopped talkin', Zed handed him the paddle with a sample on it, and, says Zed, "That's about as much like the sample in the bottle as tar is like molasses. I never tasted glucose; but that tastes mighty like the bee-papers tells about it. 'Say, Jim, how much of that would a fellow have to eat to make him want to steal from his grandmother?'"

You just ought to have seen that stranger grab to get the cover on that can. He looked like he would like to eat up Zed, but he didn't dast to say any thing.

"I guess I don't want to buy any hunny today," says Nat.

It wasn't long before the stranger was a makin' tracks for the next town.

JAKE SMITH.



SUPERSEDING QUEENS.

Question.—Is it advisable to let a queen become more than two years old before superseding her with a young queen?

Answer.—Some believe it advisable to supersede all queens over two years old, unless perhaps they except those most valued for breeding-purposes, such claiming that older queens, as a rule, are not as prolific as young queens; hence it often happens that older queens fail at a time when the work of storing surplus is interfered with. All this sounds very nice; and if time hangs heavily on any bee-keeper's hands, here is a chance for such a one to pass away his time with the idea that he is doing that which tends toward a greater financial gain; but with the average bee-keeper it is usually more work than he can do during the summer months, let alone any work of a doubtful nature.

There is no question but that we want, for comb-honey production, either very prolific queens or a

brood-chamber not of a size which will require the most prolific queen to strain every nerve to keep it filled with brood. I believe it more profitable to adjust our hive system to the average queen than to practice superseding queens, as some do. A queen should be allowed to remain as mother of a col-



"WHEN YOU SEE HUNNY NOWADAYS YOU DON'T KNOW WHETHER IT'S HUNNY OR NOT."

a talkin'. If it's a good thing for the bee-keeper when there's a short crop to have the supply kep a goin' with glucose, do you suppose the chaps that do the mixin' will be so everlastin' accommodatin' as to haul off from the market when the bees turn in a full supply?"

While this talk was a going on, Zed had got

only as long as she retains her fecundity; for prolificness, not age, should be the test in this matter. I never supersede a nice queen, no matter how old, until she shows signs of failing powers. We want queens for the eggs they lay; and for that reason, power of production, and not age, is the rule to follow. I would not keep even a *young* queen, if she did not lay up to a fair average, for there are a few queens that are not prolific enough to keep four frames supplied with brood as they ought to be; and where I find such, I always give their colonies something better to take their place. However, such queens as this last are the exception and not the rule; for the bees do not often allow such queens to remain in the hive long, especially if they are of the Italian variety. After experimenting in the direction of superseding queens for years, I now decidedly prefer to leave it to the bees to decide when their queens are worn out, unless, by outside observations, I believe they are holding on to some unprolific young queen. As a general thing, the bees will make fewer mistakes in directing this delicate matter than the wisest apiarist is likely to make. I have had queens that were five years old do good duty till the commencement of their sixth year, when the bees would supersede them that autumn, the same as they often do in the autumn, with queens commencing on their second, third, or fourth year.

WAXING KEGS AND BARRELS.

Question.—What is the best method of waxing kegs and barrels for holding extracted honey? and should all barrels and kegs be waxed when used for storing honey?

Answer.—Before waxing any keg or barrel it should be kept in some dry hot room for two or three weeks till thoroughly dried out; in other words, the barrel should be as dry as it is possible for it ever to become, at the time of waxing. Having it thus dry and warm, the hoops should be driven as tightly as possible, and short nails, that will not reach through into the inside of the barrel, driven a foot or so from each other at the rear of the last hoop, so that the hoops will not get misplaced in handling. Now pour in, at the bung-hole, from five to ten pounds of very hot melted wax, or, what is preferable, paraffine, and quickly drive in the bung. Now turn the barrel over and over, and twirl it around on each end till you are sure all the cracks are filled. Then take out the bung, pour out the wax, and heat it over again for the next. Be careful to see that the bung does not strike you when taking it out, as it will often fly with great force if the wax is as hot as it should be.

Having told how to wax kegs and barrels, allow me to ask, in answering the latter part of the query, why not use those made of soft wood, which needs no waxing? Leaky kegs and barrels can never be made entirely safe by

waxing them. The shrinking and swelling of the wood, as exposed to wet and dry, will break the wax; and sometimes a heavy jar, when moving the barrels, will crack the wax and start them to leaking. Good workmen can make tight vessels, and they cost no more than leaky ones. A barrel or keg properly made of the right kind of wood needs no waxing, and the waxing is quite expensive at best.

FLAVOR OF EXTRACTED HONEY.

Question.—What is the best plan to preserve the flavor of extracted honey?

Answer.—To give extracted honey a fine flavor it must be thoroughly ripened. While some have evaporators, both sun and other, which they run extracted honey through or over, that has been extracted in its thin or green state, till it is of nice quality and consistency, as well as having an excellent flavor, yet, in my opinion, no honey has quite as nice flavor as does that which has been left on the hive till the end of the season, the bees having been allowed to ripen it till it is so thick that it will almost stand alone after being taken from the comb. Of course, it is more work to extract such honey; but by keeping it in a room whose temperature is nearly or quite 100°, for four or five hours, it can be extracted very nicely. When extracted, honey should be stored in tin or earthen vessels, and kept in a dry warm atmosphere that is free from odors. Loosely cover and let it stand in this warm dry store-room till all the air-globules have disappeared, the scum that arises being skimmed off, when the honey can be put into glass or tin vessels, ready for sale or family use, and it will retain its fine flavor for years if kept in a proper place.



THE PURITY OF CALIFORNIA HONEY, AGAIN.

Editor Gleanings:—The assertion was made by one of your correspondents, in the Oct. 1st number, that half of the honey in California is adulterated. I am sure it can not be true, and does great injustice to California. I live in the center of one of the largest honey sections in the State, from which quite a number of cars have been shipped, and where there is still in the hands of the bee-men, at the present time, 120 tons, not 1 lb. but is pure honey, and they are holding it at 4 cts.—a price at which, even if they wanted to, it would not pay them to adulterate it. We don't need to adulterate, as our bees work seven months in the year, and the honey rolls in in a steady stream, keeping the bee-men busy taking care of it. There may be, and probably is, a little, that, after it reaches the city, is adulterated; but when we

get our bee-keepers' associations a little better organized we will look after them, as we have a law in this State, if we enforce it, that will prevent their calling it honey if it is adulterated. The great bulk of our honey leaves the State as pure as that found by Samson in the carcass of a lion, and I know it is ever so much nicer.

S. B. HOLTON.

Selma, Cal., Nov. 8.

THE ATLANTA EXPOSITION; SOMETHING FOR BEE KEEPERS WHO EXPECT TO ATTEND.

Inclosed please find card and circular of Mr. Smith, whom I am glad to recommend to all bee-brethren as a sincere Christian gentleman, a native Georgian whom I knew in Florida. All who call on him will be kindly treated. It will be greatly to their advantage to call on him before going elsewhere; within reach of depots and postoffice, in the very heart of the city, and close to the highest-rate hotels for those who want to pay higher prices. Street cars to exposition, 5 cts. I consider myself fortunately located — much better than I had hoped or expected.

F. DANZENBAKER.

Atlanta, Ga., Nov. 16.

If those coming to Atlanta, Ga., during the Cotton States and International Exposition, will write me how many in their party, and what kind of accommodations wanted, and send from some pastor of a church, superintendent of Sunday-school, president of Young People's Society, or responsible person, a statement that they are ladies or gentlemen, I will furnish such accommodations for them. I have many homes of the best and most wealthy Christian citizens of Atlanta opened for guests thus recommended.

Thieves, pickpockets, and robbers of all kinds will be here from everywhere. These will get homes where they can be admitted so they may do their work. The city will be crowded with people all the time; but if you send me your application early I can get you in a home free from this class.

Write your full address, number in the party, time expected to stay, sex of each in party, and of what church and society you are a member.

12 North Broad St., Atlanta, Ga. WM. B. SMITH.

CREOLINE A CURE FOR FOUL BROOD.

Some few years ago I saw an article in a Los Angeles paper, written by a man in Germany, who had used creoline with much success for curing foul brood. As I had been much bothered with foul brood I made up my mind to try creoline, although I had very little faith in it. When I started using it in October or November, foul brood was very bad throughout my whole apiary. I just sprayed my bees at the entrance to the hives, and did not examine the hives, as I did not doubt that I should have to clean them thoroughly next spring. But when I examined the hives in the spring I found them entirely free from foul brood. I have been troubled very little since, as I use creoline whenever it appears.

Directions for using.—Drop from 25 to 30 drops of creoline into one quart of pure soft water, and with this spray the bees at the entrance during the warmest part of the day, every second or third day. Repeat this five or six times. Also spray combs. I use an atom-

izer with coarse spray for entrance, and the fine spray for combs. The best time to spray is in the fall, right after the honey season is over, as the creoline has a tart taste, and may affect the honey if used during the honey season.

The apiary which had the foul brood so bad, but which is free from it now, made this summer 412 lbs. of honey, extracted to the hive.

Valle Vista, Cal., Nov. 7. HENRY OTTO.

[I don't have much hope, myself, that *real* foul brood can be cured so easily; but then, I hope some one will try it and report.—ED.]

"PETRIFIED HONEY-COMB.

Is there any such thing as petrified comb? I found a stone about as big as a fist. I broke it in two with a hammer. Inside it looks like a box of comb honey, but smaller, and pressed together. It must have originated with bees or some insect like them. I never heard of petrified comb.

HENRY BRESSER.

Toledo, O., Nov. 12.

[The stone you found is probably what is more correctly called honey-comb coral. Prof. Cook, in his "Manual of the Apiary," page 157, has this to say of it:]

"A very common fossil, found in many parts of the Eastern and Northern United States, is, from its appearance, often called petrified honey-comb. We have many such specimens in our museum. In some cases the cells are hardly larger than a pin-head; in others, a quarter of an inch in diameter. These are not fossil honey-comb, as many are led to believe, though the resemblance is so striking that no wonder the public generally are deceived. These specimens are fossil coral, which the paleontologist places in the genus Favosites, favosus being a common species in our State. They are very abundant in the lime rock in Northern Michigan, and are very properly denominated honey-comb coral. The animals of which these were once the skeletons, so to speak, are not insects at all, though often called so by men of considerable information.

THE TEN-FRAME IN THE LEAD.

We here in this part of Virginia go in for the ten-frame L. hive. There were two parties manufacturing hives here, the one 8 and the other 10 frames. Both were talking up their merits. The eight-frame man is now out of business, and the ten-frame man has the whole field to himself. I myself use the Manum hive of 11 frames and double story for extracted, and single story and section for comb. Give me a good brood-nest, and, consequently, a large colony, and if there is honey to be gathered they will get there.

S. H. BLOSSER.

Dayton, Va.

MORE THIEVES; THE HOUSE APIARY FOR THE REMEDY.

I think the house-apiary for bees, described in GLEANINGS, is just the thing, and here is a child that will have one if all goes well. The note about petty thieves was right to the point. If I had had a bee-house this season it would have saved me \$300 besides what I fed the bees. I got a sample feeder from Boardman a few days before it occurred, and I set it to work, and it works like a charm.

C. H. WIGGINS.

Stimson, Mich., Nov. 4.



THE *Kansas Bee Journal* has been merged into the *Rural Kansan*.

I EXPECT to attend the Chicago convention, January 9, 10, and perhaps the convention of the Ontario Bee-keepers' Association. Now that I have so far recovered my health, I have made up my mind to make up for lost time.

OUR old correspondent J. A. Green, who formerly wrote for these pages more frequently than of late, has finally deserted the ranks of bachelorhood and has taken unto himself a "queen" to reign over his house. I told him at the North American, at its meeting in Chicago last, that such a good-looking bee-keeper as he ought to have a "better half." Although he didn't take up with my suggestion then and there, perhaps he has been conning it over as a sweet morsel under his tongue.

THE BEE-KEEPERS' CONGRESS meets at Atlanta, Ga., Dec. 4 and 5. It is in no way connected with the North American, nor is it expected to interfere with it. Dr. Brown, who is the prime mover, says of it in the last *American Bee Journal*:

"It will simply be a sort of informal meeting of representative bee-keepers from different portions of America, to deliberate and discuss questions that concern the present and future interests of the industry of bee-keeping. Essays will be read by W. S. Hart, O. O. Poppleton, Dr. Peete, G. W. Demaree, Messrs. Dadant, Doolittle, Van Deusen, Mrs. L. Harrison, and others.

"The City Hall has been secured for the meeting. Excursion rates to the Exposition can be obtained from all the principal towns and cities. Rooms can be had at the Jackson Hotel (near the depot, and one block from the place of meeting) for 75 cents per day, and 50 cents for meals. The Jackson is a new hotel, and good place. Those who want less rates can find them at the Adkins House, 12 Broad Street."

The congress that met at New Orleans during the exposition was a grand success. At this meeting there was the largest gathering of bee-keepers that I believe ever assembled in this country, if we except the meeting of the North American at Chicago during the World's Fair. If the congress at Atlanta shall be any thing like its predecessor in the general attendance, in the presence of representative bee-keepers from all over the land, and in enthusiasm, we shall hope for a grand meeting and a good time. Seeing the exposition itself alone will more than repay the cost of transportation, and reduced rates are offered from all points. A. I. R. expects to be present. He will arrive in Cincin-

nati Monday, the 2d, so as to leave on the 7:30 P.M., via L. & N. He hopes to meet other bee-keepers on the same train.

THAT MOOTED HIVE QUESTION.

NOTWITHSTANDING many of our correspondents seem to be interested in this subject, and that there has been a general request for its continuance, I believe the time is now drawing near when we should draw it to a close. I shall use such matter as we have in type, after which we will devote our columns to other subjects. Much has been gained by the discussion I am sure; and what we have learned has been pointed out in previous editorials. I take pleasure in calling special attention to an article in this number, by R. C. Aikin, which sets forth pretty clearly the conditions under which the larger and smaller hives may give the best results.

THE DADANTS AND LARGE HIVES.

THE Home of the Honey-bees has again been favored with a call from another prominent bee-keeper and supply-man. This time it was C. P. Dadant, the foundation-maker, of Hamilton, Ill. Unlike some of our recent visitors he did not call in the interest of his health to see Dr. Lewis, preparatory to going on to the beef-diet cure. Oh, no! he was the very picture of health. Typhoid fever had left him (as it often does its victims) several notches better in health.

It will be remembered that the Dadants have been the pioneers in the advocacy of large hives—not simply ten-frame Langstroth, but ten-frame Quinby—frames that are $18\frac{1}{2} \times 11\frac{1}{4}$ in. instead of the L. size, $17\frac{1}{2} \times 9\frac{1}{2}$ inch. When I asked C. P. how they still stood on the hive question he replied that they were of the same opinion still. They have tested the matter over and over again on an extensive scale, with whole apiaries, only to find in every case that the large Quinby gave the best results. They had no "ax to grind," as it made no difference to them which style of hive or frame was adopted.

I told him it must be somewhat encouraging to them to note that, while they at first apparently stood alone, now a change *toward* their views and practice seemed to be slowly coming on. Yes, he said they long ago decided that time would vindicate their position.

In France the large Dadant-Quinby hive, among intelligent bee-keepers, is almost the standard.

The Dadants keep now only about 350 colonies. They have kept as many as five and six hundred. Besides their large foundation business, and the bees, they are extensive growers of grapes. C. P. looks after their business interests while the elder Dadant attends more strictly to bee-literature. While he has not written much of late for the bee-journals of

this country, he is a constant contributor to the French journals; and in that country, if I am correct, is counted as the highest authority.

By the way, the junior Dadant has lately come into the proud distinction of "father-in-law." It seemed rather strange to him, but he was getting used to it. His nineteen-year-old daughter has gone with a handsomer man than he. Congratulations to the new couple.

Although the Dadants, in a business way, meet us in sharp competition, it is a pleasure for me to record that there are no bee-keepers whose friendship we value more highly. Their competition has always been fair, and their business deals strictly honorable.

REPORT OF THE COMMITTEE ON AMALGAMATION.

The committee appointed by the last meeting of the North American at Toronto, to report on a plan of consolidation of the two organizations, the North American and Bee-keepers' Union, have been hard at work; and now, after much correspondence, are ready to submit their report, which is as follows:

We, the Committee appointed at the North American Bee-keepers' Convention, held at Toronto, Ont., September 6th, 1895, on the proposed consolidation of the North American Bee-keepers' Association and the National Bee-keepers' Union, report as follows:

The duties and powers of the Committee are clearly defined in the Resolution which authorized the appointment of the Committee, which after prolonged discussion was unanimously adopted. This resolution was as follows:—

RESOLVED, That a Committee of seven be appointed to take into consideration the proposed amalgamation of the National Bee-keepers' Union and the North American Bee-keepers' Association, and to arrange terms therefor, with full power to perfect the same so far as this Association is concerned; and to report through the bee periodicals, as soon as possible, the present President of this Association to be one of the members of that committee.

The Committee met and organized, and unanimously adopted the following address:

To Officers and Members of the National Bee-keepers' Union, GREETING:

Being co-workers in one common cause—the welfare of the bee-keeping fraternity, and the advancement and defense of the pursuit of apiculture in America—we are authorized by the North American Bee-keepers' Association to offer you the "hand of fellowship," congratulating you on your efficient organization and successful work during the ten years of your existence.

As there is no necessity for the existence of two organizations to accomplish the work which can easily be done by one, we propose a consolidation of our two societies, for the purpose of creating a closer "bond of union" between apiarists, and saving them the extra expense of membership in two bodies in order to gain the benefits and advantages which one can bestow, when united for that purpose.

Ever realizing that "in union there is strength," we offer you any portion of our name you may desire to appropriate.

We offer you our grand history and work accomplished during the past quarter of a century.

We offer you our members, in every State, Province, and Territory of North America, and, so far as we can, we promise their co-operation in all measures looking to the advancement of the interests of the pursuit, and a continuance of the glorious record you have made in the ten years of your successful existence.

All we ask in return is, that you add, to your al-

ready efficient organization, similar annual conventions to those we have heretofore been holding, at some convenient time and place, and, if possible, that you devise some equitable system of delegation so as to make such thoroughly representative, competent to act for the entire membership.

We desire that this proposition be submitted to your members, together with such constitutional provisions as may be necessary to effect the consolidation and provide for annual meetings, so that a full and free vote upon the same may be taken at your next annual election of officers, and hope that this proposition may be accepted—that being the only necessary step to unite us both into one strong and well-equipped organization. If the consolidation is effected, it would be desirable for it to go into effect as soon as possible.

THOMAS G. NEWMAN, Chicago, Ill.
F. A. GEMMILL, Stratford, Ont.
J. T. CALVERT, Medina, Ohio.
M. B. HOLMES, Athens, Ont.
A. B. MASON, Toledo, Ohio.
EUGENE SECOR, Forest City, Ia.
R. F. HOLTERMANN, Brantford, Ont.

CONSTITUTION OF THE NORTH AMERICAN BEE-KEEPERS' UNION.

ARTICLE I.—NAME.

This organization shall be known as the "North American Bee-keepers' Union," and shall hold meetings annually at such time and place as may be designated by the Board of Directors, due notice being mailed to all members at least 60 days previously, and published in the bee periodicals of the United States and Canada.

ARTICLE II.—OBJECT.

Its object shall be to protect the interests of its members, to defend their rights, and to disseminate apicultural knowledge among the people.

ARTICLE III.—OFFICERS.

Sec. 1.—The Officers of this Union shall consist of a President, Vice-President, Secretary, Assistant Secretary, and Treasurer, whose duties shall be those usually performed by such officers.

Sec. 2.—The Secretary shall be General Manager, and shall have charge of the executive work of the Union, under the advice of the Board of Directors.

Sec. 3.—The officers shall be elected by ballot, and hold their several offices for one year, or until their successors are elected and qualified.

Sec. 4.—Nominations for officers shall be sent to the General Manager before the first day of November in each year, who shall cause the same to be printed in the bee periodicals—and shall be printed and mailed by Dec. 1, with the necessary ballots, to every member who has paid dues for the previous year.

Sec. 5.—The Treasurer shall furnish a bond of \$3000 (to be approved and held by the President), for the faithful accounting of the funds of the Union, and shall pay out the funds only on vouchers signed by the President and Secretary.

Sec. 6.—The terms of office shall be for the calendar year, and the polls shall close on the last day of December.

Sec. 7.—Each annual meeting shall, by majority vote, elect a Chairman and Recorder from the present, to preside over the meeting, and prepare a suitable report of the proceedings for publication in the bee periodicals as soon as possible after the close of the meeting. Any member (whether an officer of the Union or not) shall be eligible to these positions.

ARTICLE IV.—BOARD OF DIRECTORS.

The officers shall constitute a Board of Directors, which shall determine what course shall be taken by this Union, upon any matter presented to it for action, and cause such extra assessments to be made upon the members as may become necessary; provided that only one assessment shall be made in any one fiscal year, without a majority vote of all the members (upon blanks furnished for that purpose), together with a statement showing good reasons for another assessment.

ARTICLE V.—MEMBERS.

Any person may become a member by paying to the Secretary an entrance fee of \$1.00, for which he shall receive a printed receipt, making him a member of the Union entitled to all its rights and benefits until the 31st day of December, following. The annual fee of \$1.00 shall be due on the first day of January in each year, and MUST be paid within three months in order to retain membership in this Union.

ARTICLE VI.—FUNDS.

Sec. 1.—The funds of this Union shall be used for any purpose in the interest of the pursuit of bee culture, when approved by the Board of Directors; and to pay the legitimate expenses of the Union.

Sec. 2.—The salary of the General Manager shall be determined by the Board of Directors, but shall not be more than twenty (20) per cent of the gross income for each fiscal year.

ARTICLE VII.—AMENDMENTS.

This Constitution may be amended by a majority vote of all the members, provided that all proposed amendments shall be presented in writing, signed by three members, and sent to the General Manager before the first day of November, so that they may be presented in his Annual Report.

It seems to me the committee, considering the fact that its various members live hun-

dreds of miles apart, have done their work faithfully and speedily. While I hardly see how the proposed constitution could be improved, it is now submitted to the larger wisdom of bee-keepers at large for suggestions. It may occur to some, for instance, that the membership-fee should be reduced, as that has been advocated some; but the committee, if I am correct, feel that this is too bold a step just now. This is, perhaps, a question that should be left for the future.

THIEVES AND MISCHIEVOUS BOYS AT OUT-YARDS; HOUSE-APIARY THE BEST SOLUTION OF THE PROBLEM.

SEVERAL times our basswood out-apiary has been visited by thieves; and a few days ago some boys, bent on mischief or malice, actually overturned several of our two and three story colonies. It could not have been the wind, because there was intelligent (not to say mischievous) design in their madness. For instance, one hive—a three-story one—was turned bottom upward, and set back exactly on the same spot of ground. Strangely enough, although there was lots of honey, none was stolen; and, again, tools were scattered all over the apiary. Happening by on my bicycle I discovered this reversed order of things, and, as luck would have it, I must have come around shortly after the boys left; for robbers had not yet gotten at the exposed tops of hives from which the covers were removed. Is it possible I happened to scare them off before they had time to appropriate the honey?

The apiary is located among the trees a little way back from the road, and the next house stands a little excluded from the view.

Well, what did I do? Simply set things to rights. Those big double and triple deckers I simply rolled like so many sugar-barrels, over and over and over, until succeeded, after much effort, in getting them near their old location; then I boosted, and grew red in the face, until I got them back where they were. "My!" thought I, as I got the last hive back to its place, "it must have been lots of fun for those boys to tug at them, if they worked as I did," for they were pretty well filled with honey and bees. You see we had not yet fixed them over for winter.

But how about the bees, the combs, and the frames? The latter were Hoffman, of course, and stayed right where "they were at;" and after the hives were back in their places you would not know, by looking at the bees or combs, that they had been subject to such rough treatment. So much for self-spacing Hoffman frames. What would have been the result if they had been the old-fashioned loose unspaced kind?

THE REMEDY.

At first I proposed inserting a notice, offering a reward for the arrest and apprehension of

the guilty parties, for the penalty, in this State at least, is very heavy for in any way unlawfully meddling or tampering with hives of bees; but on second thought I concluded it would do no good, and perhaps direct the attention of other malicious persons to the apiary in question.

In mentioning the matter to F. A. Salisbury he told me that not only his home but his out bees were in a house-apiary—just such a one as was recently described on page 662 of our issue for Sept. 1st. He could not only handle twice as many colonies with the same labor because every thing is so handy, but he could lock it up, secure from petty thieves and mischievous boys. The honey could be taken off at the proper season, and stored in the building, and he could at his leisure come and take it away.

Speaking of the house-apiary in this connection reminds me of the quick way of feeding his bees, and to which he briefly alluded in his article on page 663. Of course, inside he uses for convenience the common out-door hives. These give him the advantage of shifting whole brood-nests or supers; and then he can, when desired, bring an outdoor colony inside, and, *vice versa*, shift an inside colony to the outside. Instead of regular bottom-boards he uses shelves that are part and parcel of the house. In the bottom of this—that is, under each hive—are two grooves that are intended for feed. These grooves, extending outside of the hive proper, and covered with wire cloth as far as they project beyond the hive, prevent the escape of bees. When feeding-time comes, syrup is made in the house by the extractor plan, as given elsewhere. Glass Mason jars are filled full; squares of tin are then laid over, and, last of all, the jars are inverted and set over the wire cloth covering the aforesaid grooves. The tins are withdrawn from the jars now inverted, and the feed runs along the grooves under the brood-nests. The whole work is done inside of the building, secure from robbers and thieves of the human kind (some of our syrup during feeding was stolen also, at our basswood yard). Friend S. says the feeding can be done up in short order; and as fast as the jars are emptied, which can be told at a glance, they may be refilled if the colony requires it. As soon as they are fed they are prepared for winter, which is another short operation.

Mr. Salisbury says he has also overcome the smoke nuisance. By his arrangement he secures a cool pleasant place to work, no matter how hot outside.

I believe I shall not rest till we get a house-apiary at our basswood yard. A few more visits from thieves, to say nothing of the annoyance of having the hives tampered with, and tools stolen, would pay for a good building, in time.

THE SALISBURY TREATMENT; HOW TO PREPARE THE LEAN MEAT.

A LETTER FROM DR. SALISBURY HIMSELF.

Dear Mr. Root:—I notice in GLEANINGS for Nov. 1, page 817, an article on the preparation of "Salisbury steak," which is most decidedly wrong. The writer evidently had no idea of the fundamental principles of causes of the various diseases. The whole reason why the beef is ground is to extract the fiber from the muscle-pulp. This fiber is the very element which causes so much trouble by producing thickenings of various tissues throughout the body, and causing partial and complete paralysis; and it is very essential that it should be removed from the beef, as far as possible, especially in the cases of those who are very sick.

The following is the correct instruction for the preparation of the beef:

Eat the muscle-pulp of lean beef made into cakes and nicely broiled. This pulp should be as free as possible from connective of glue tissue, fat, and cartilage. The "Enterprise chopper No. X" (10) answers very well for separating the connective tissue from the pulp. When this machine is new the knife should have the sharp edge taken off with a whetstone, so as not to cut the fiber, and the end-plate should not be screwed up too tightly, but left loose, to allow a small space between it and the knife—enough to prevent *cutting* the fiber, and allowing it to be caught by the knife and by the holes in the end-plate. After grinding half a pound or a pound it will be noticed that the beef does not pass through. This is due to the holes being filled with the fiber, and fiber also collecting on the edge of the knife. Take off the end-plate and knife, and remove the fiber, and proceed as before.

In order to get out all of the fiber or connective tissue it is necessary to unscrew the end-plate and remove the fiber several times, and to put the beef through the machine from three to five times, according to the quality of beef. Previous to chopping, the fat, bone, tendons, and fasciæ should all be cut away, and the clean muscle cut up in pieces an inch or two square. Steaks through the center of the round are the richest and best for this purpose. Beef should be used from well-fatted animals that are from four to six years old.

The pulp should not be pressed too firmly together before broiling, or it will taste livery. Make the cakes from half an inch to an inch thick. Broil slowly and moderately well over a fire free from blaze and smoke. When cooked, put it on a hot plate and season to taste, with a little butter, "pepper and salt."

If you follow these directions you will have fine cakes free of fiber—tender, and in all a complete article of healthful diet.

J. H. SALISBURY.

170 W. 59th St., New York, Nov. 15.

I am sure, doctor, we are all of us greatly obliged for these timely words from the discoverer and originator of this method of treating disease. Ernest wishes me to emphasize the fact that there is great need of an intelligent physician to direct, especially where the disease is a serious one, and where it is necessary to come down to an absolutely lean-meat diet and nothing else. I have known many cases where people were greatly benefited by simply using more meat and less vegetables, especially avoiding the excessive use of sugar and other sweets. I can remember all along during the past 25 years, especially when my work required me to be in the office more than usual, Mrs.

Root would again and again say something like this:

"Look here, dear husband, you are getting into trouble just because you have neglected to eat meat of late, and you are eating too much other stuff that you should know by experience you can not stand. Now just let me prepare your food, and map out your diet for you for only just a few days, and see how quickly you will come out all right."

Well, she did bring me out all right; but notwithstanding I kept getting skeptical, or suggesting that other things would do as well as meat. By the way, there is one thing that I wish to mention. A great many people say that it might do for *others*, but it would never answer for *them* at all. They could not eat it—don't like it, and would starve to death, etc. In fact, when I recently adopted the exclusive meat diet I talked about the same way. In just three or four days I began to like my meat, and I can't remember a single occasion during the whole past three months when I did not have a good appetite, and have eaten with a good relish at least 10 or 12 ounces of the ground meat. When I got to using sirloin meat instead of the ground meat, at first I began to swallow the hard or gristly portions after I had chewed them pretty thoroughly. But I found this did not answer; and since then I have been having a small dish right beside my plate, where I put all hard, tough, and gristly portions, after chewing them enough to recognize what they are. Where digestion is weak or impaired, I am sure all these portions should be carefully taken out of the mouth.

By the way, the publishers of the Salisbury books, Kellogg & Co., 1031 Sixth Ave., New York, or 32 Church St., Toronto, have kindly furnished us a lot of little hints, in pamphlet form, entitled, "Who is Dr. Salisbury?" and they give us a very complete history of Dr. Salisbury's discovery, and much other valuable information. We can mail them free of charge to anybody who applies, or you can get them, if more convenient, of the publishers, as above.

EGGS AS A HEALTH FOOD.

Dear Friend Root:—I have read with great interest what you have recently said in GLEANINGS on the subject of health. I have tried using the broiled beefsteak, with excellent results; but I have watched anxiously to see if any thing would be said regarding the use of fresh eggs. There are many people who need a change of diet to help them out of a bad condition of health, but they do not live where they can procure fresh beef every day. Those who live in the country can produce the fresh eggs right at home; and I think that, when properly used, they are very helpful. I have found that a piece of toasted bread and two or three poached eggs make a breakfast that seems to agree with a disordered stomach as well, or nearly so, as the steak. But eggs should be properly cooked. They should not be boiled hard, but cooked to a jelly, either by poaching or by placing them in boiling water, and then removing the dish containing them to the back part of the stove, where they will cook to the proper degree in about ten minutes.

A man in Vernon Co., this State, died at the age of 106 years. He was asked what had been his principal food. His reply was that he had lived largely on scalded eggs. I know it has been claimed that the use of eggs is against purity; but I believe it is no more true than the claim that lean beef makes people "ferocious."

I should like to know the opinion of yourself and the doctors as to the use of eggs. They are not vegetable food, neither does the procuring of them necessitate the taking of life.

Brownstown, Wis., Nov. 6. HARRY LATHROP.

Friend L., I have omitted to say that we are permitted to have the white of an egg with our beef-diet occasionally. As it is principally al-

bumen, and contains neither starch nor sugar, it is, I believe, almost as free from objection as the lean meat itself. I presume, however, it would not answer for a steady diet, like the lean meat. With most patients the yolk is objected to. I think I have heard Dr. Salisbury say that it contains sulphur in considerable quantities; and where there is a disposition toward gravel or mineral deposits in any part of the system the yolk of the egg should not be used—or, at least, very sparingly. Inasmuch as the use of eggs does not necessitate the taking of life, I entirely agree with you. But in most markets, where one uses eggs for even a small part of his diet, it would be rather expensive—more so, I think, than lean meat.

THAT POTATO PREMIUM.

MAULE'S NEW EARLY THOROUGHbred.

Nothing we have ever suggested in the way of a premium has made such a stir as that pound of Maule's Early Thoroughbred potato, offered for one new subscriber. By the way, we are just informed by friend Maule that the price of the potato for 1896 is \$1.50 per lb., post-paid; 3 lbs., \$3.00; 10 lbs., \$7.50. Of course, I am not to undersell him, therefore we can not sell a single pound of potatoes for less than \$1.50; but we are permitted to make every present subscriber to GLEANINGS a present of 1 lb. of the potatoes if he will send us a new subscription. We do this in order to have GLEANINGS introduced in a new locality, new post-office, or even into a new family. Of course, no one would be so foolish as to send us \$1.50 for a pound of potatoes when he could have the same pound for only \$1.00, and have GLEANINGS thrown in *besides*; so if you really want a pound of the potatoes, and do not want to pay \$1.50, why, send us \$1.00, and then make somebody a present of GLEANINGS for the one year. It is a tremendous offer we are making. I am well aware; but it is of very great benefit, as you may readily see, to any publisher who has a good journal (and that means *our* journal, does it not?) to have that journal introduced and read. Sending sample copies does pretty well; but nobody gets acquainted by looking over one sample copy. Your humble servant, A. I. Root, is said to be a little peculiar, and that he has some queer fashions of his own; but after having GLEANINGS a whole year, people generally get acquainted with him and understand him, and they very generally like to keep up the acquaintance—it *pays* them to do so. Now, this is not boasting or bragging, for we are all peculiar to a greater or less extent; and it helps amazingly in this world of ours to get acquainted one with another, especially where there is even a little bit of "hungering and thirsting after righteousness," we will say, on *either* side.

Well, now, since making this offer of mine, unforeseen and unexpected complications have come in. For instance, instead of getting one new subscriber, a man gets two*; and then some one else wants to know how the *new* subscriber is to get a pound of potatoes, for he

wants it just as bad as the other man. Well, the plain and evident way is for the new subscriber to start out himself and get another new name among some of his friends and acquaintances; or if you secure a new name, and the subscriber wants a pound of potatoes also, you can be neighborly and divide up. Tell him if he will subscribe for GLEANINGS, and give you \$1.00, you will give him half of the pound of potatoes. Why, just look here, friends; what do you suppose can be done with a single half-pound of potatoes, or even *less*? When I was down in Missouri, one dark night I blundered into the family of our good friend Yoder. They were all gathered around the supper-table. But, weren't they astonished when they found that A. I. Root was there among them at that late hour of the night! and wasn't there a hustling of the chairs to make room for the editor of GLEANINGS! and didn't they just pile the good things over at my end of the table! Well, the next morning we went out and looked at friend Yoder's garden. I told you about his Prizetaker onions for which he was going to get \$1.50 per bushel. He got the plants started under glass (you will remember) by pulling the windows out of his shop. Now, if you will turn back to GLEANINGS, page 752, you will see what he undertook to do with only 6 ounces of the Craig potato. In fact, we copy his statement from the above page:

The Craig Seedling potatoes you sent me arrived at the postoffice on the coldest Sunday of last winter, and were not taken out till Monday. They were frozen, all but 6 ounces. I now have 16 hills of the plants, and 60 side-shoot hills.

G. J. YODER.

Garden City, Mo., Aug. 6.

Now, here is the outcome:

Friend Root :—The 6 ounces of Craig potatoes mentioned in GLEANINGS, page 752, produced 87 lbs.; the main plants, 45 lbs.; side shoots, 42. The latter part of September was very dry, but the side-plants remained green until frost.

G. J. YODER.

Garden City, Mo., Nov. 15.

There, friends, you see what Gideon Yoder did with 6 ounces of Craigs—87 lbs., or at the rate of 232 lbs. from 1 lb. planted. But the Craig is a late potato. With this new Maule's Early Thoroughbred potato you can probably get *two* crops in a season—at least, most of us can. The way to do it is being pretty well written up in our various gardening periodicals. And while we are about it we might give right here what friend Greiner says in the *Practical Farmer* for Nov. 9, in regard to the Thoroughbred in his locality:

Blood will tell.—This is what Mr. Terry tells us in *P. F.* of Oct. 5, first page. We have tried the same potato of which he speaks, a new early one sent by Mr. Maule for testing. In my own patch, four hills were planted with the two tubers, and the yield was nothing remarkable. A brother of mine made twenty-one hills of his two specimens, and planted them in the field with Carman No. 1, Clapp's Favorite, and Star. The yield of the twenty-one hills amounted to just half a barrel (90 lbs.), or twice as much as Mr. Terry got. The potatoes are of enormous size, and in quality all that any one could desire. Yes, blood will tell. If you plant a heavy-yielding variety, even with careless culture, you will be more liable to get a big yield than when you plant scrub varieties, even with the best of treatment.

He also says, in regard to the Freeman potato, in the same issue, as follows:

The Freeman, I think, has made more friends this year than ever before. It is surely as beautiful a potato as one can ever hope to find, so smooth and clean and uniform. It is also as fine a table potato as we ever had, so white and mealy. Of five competitors for premiums on best peck of table potatoes at a local Western New York fair, three exhibited Freemans, and one got first premium, while another had second. When it comes to "best table potatoes," the Freeman surely takes the lead. We

*If a man gets two new subscriptions he gets 2 lbs. of the Thoroughbred potatoes, and so on—a pound of potatoes for every new subscription: and he can work at it all winter if he wants to—that is, so long as the five barrels of potatoes hold out. By the way, our offer on page 841, Nov. 15, a pound of potatoes for subscribing for 1896 and '7, all together, will be withdrawn after you see this. If you do not see this at all, it will be after Dec. 15. You see there are not going to be potatoes enough in that five-barrel lot to go around.

have often complained of "too many and too small potatoes in the hill," as a characteristic of the variety. Such complaints are not heard this year. The Freemans have turned out well all over. I had planted mine in my usual way of seeding—about a half medium-sized tuber in a hill. Yet the potatoes when dug were just about the right size for use or market, few extra large, and almost no small ones. They appear well in the bin. The yield was at the rate of about 250 bushels per acre. What they would have done, if not checked by the long dry spell, is hard to tell.



With the same measure that ye meet withal, it shall be measured to you again.—LUKE 6:38.

The above has been repeated over and over again so much that some of the friends may be tempted to say, "Oh dear me! I have heard that over and over again so many times that it really makes me feel tired to hear it." Yes, this is indeed true; but notwithstanding the sermons and admonitions and grand texts we have in such profusion all about us, through our periodicals, from the pulpit and the prayer-meetings, and in the Endeavor Societies—notwithstanding all this, we are selfish and greedy still. Evidently, we do not believe it. We preach one thing and practice another. This matter has been brought vividly to my mind since I have been in the potato business by the subject of barrels. How much is a barrel? The word "barrel" has come to mean so much or so little that several times I have been tempted to think we had better abandon barrels and use bushel boxes—the Terry bushel box, for instance.

There are several reasons, however, why boxes can not well take the place of barrels. First, one man alone can handle a heavy barrel easier and quicker than he can handle a box of the same weight. He can roll it along the platform or he can roll it up a plank into a wagon. Transportation companies, I believe, make a distinction in rates of freight on goods in barrels over those in boxes. Again, a barrel properly hooped will stand more hard usage than a box of about the same capacity, weighing the same number of pounds. That is, a barrel weighing 20 lbs. will hold more goods, and keep them in better shape, than any box that has ever been made of similar weight. Apples and potatoes, to ship without being bruised and mashed up, should be pressed in solid, so they can not shuck about in transit; and this can be done with a barrel better than with any sort of box. Finally, my impression is that a barrel can be made for less money than a box of the same capacity. For some time to come, probably, barrels will be used for shipping all sorts of produce and a great variety of goods.

Years ago we used to call a barrel three bushels; and we used to have good fat plump-looking barrels. They did not look starved, and straight up on their sides, like a stovepipe. When I was a juvenile, right across the street from the old schoolhouse, under the limbs of a spreading oak, was a cooper-shop; and that cooper of olden time made good honest barrels. How patiently he explained to each juvenile mind the whole operation from beginning to end, from bringing staves and heading from the piles out in the yard, and making them into nice honest smooth barrels, and all by

skillful handwork, from first to last! Those barrels would hold flour, without having it sift out; or they would hold vinegar—especially when the purchaser said he *wanted* a good vinegar-barrel; and they held a good plump three bushels. I do not remember that our good friend Mr. Coe ever made a small, scanty, scrimped, straight-sided barrel, such as we have nowadays. Well, I can remember later along when there was a discussion in regard to the size of barrels. Somebody complained, who bought a barrel of apples, that there were not three bushels.

"Oh! yes, there is," said the dealer. "Look here; we will measure them up."

"But," says the purchaser, "you don't heap up your half-bushel enough. A barrel of apples and potatoes must be piled clear up."

And here again came discussion. The dealers were not always to blame, because, when a farmer took a load of potatoes around town somebody would say, "Yes, I will take three bushels of potatoes providing you give good measure."

"Well, how good measure do you want?"

And then the buyer piles them on the half-bushel just as long as he can make the potatoes stay on top. This is manifestly unfair—as unfair as the other way; and I have seen grocers bantered; and where they happened to be meek and inoffensive sort of people, some customers would impose upon them by demanding all that would lie upon the measure. Can you blame the grocer for wanting some measures that might be heaped up to suit, and not contain over a real peck even then?

Well, by and by it transpired that there was an agreement, in order to settle all these jangles, that a bushel of potatoes should weigh so much, say 60 lbs. My impression is, that the laws of the State of Ohio have fixed a bushel of potatoes at the above weight; and we have also tables giving the weight of grains as well as vegetables that shall constitute a bushel. One unfortunate phase of this matter is, however, that different States fix the bushel at different weights; and on buckwheat the weight of a bushel varies as much as three or four pounds. It seems to me as though this thing need not be, for somebody has to be the loser when grains have to be shipped from one State to another. It has been urged that, when potatoes are just dug—especially if they are a little damp, and some of the soil is sticking to them, weighing is not fair either; for 60 lbs. of potatoes, just as they come from the field, will weigh only 57 or 58 lbs.—or perhaps less, after they have been kept over winter. This may be true; but selling by weight is very much better than letting every one who is of a greedy turn of mind give half a bushel even full or rounded up according as he happens to be buyer or seller.

For many years we have been in the habit of purchasing second-hand barrels at the groceries and stores; and we find barrels that will hold as little as two bushels and some that will hold as much as four, and even more. Since we have got into the potato business we have found that, in order to do business in a square honest way, we must define in our price lists that a barrel of potatoes is supposed to be 11 pecks; and then we usually put in parenthesis, by way of safeguard, "(165 lbs.)." But even if our barrels are made at a barrel-factory, they do not seem to be uniform in capacity. A lot of 1000 may *average* about 11 pecks; but some of them will be likely to lack half a peck while others will go half a peck over. May be there are barrel-factories that do better than this. I hope so. Sweet potatoes, as they come from

the South and East, are evidently put up without weighing at all. If you specify, however, in making an order, that you will take 10 barrels of potatoes providing they average 150 lbs. to the barrel, you will likely get it; and I think this is the best way to do business. It is some trouble to remember and specify, every time, what you expect to have when you agree to pay a certain price; but it has the effect of avoiding jangles and disputes, and is very much pleasanter all round. The man who is careful to build up a good name, and keep his good name after he gets it, will be very apt to comply with all your conditions if he expects your order. In our own practice we put 165 lbs. in a barrel—or, rather, the boys have instructions to put in 167 lbs., so as to be a little over rather than under; and then if the barrel is not full we fill up with straw or shavings. If a customer orders three barrels we sometimes put the whole into only two very large barrels. This is generally satisfactory, providing a card of explanation gets there before the potatoes do. If our packers neglect to do this on the invoice, sometimes the customer will write back:—

“Look here, Mr. Root. I ordered and paid for three barrels of potatoes; but I found at the station only two; and the agent says there are only two on the bill of lading. I have been told you are a good, straight, honest man: but it looks as though I had been humbugged in this my first deal.”

Most of you, especially those who are old in business, will blame the man for being in haste to think evil; but when I look abroad and see how many there are who send away their hard earnings, and get swindled out of part or all of it, I confess I feel a good deal of charity for those who are in haste to think they have been cheated. A good many times I have felt like giving almost the whole business world a good shaking—that is, if I were equal to the task. Do you ask why I would shake it? Why, because people do not *talk* more and *explain* things better. A good many hate to write a letter. They can not even take a postal card and pencil, and say: “You will find your three barrels tightly packed in two very large barrels.” Now, this much on a postal might save a jangle that would cover pages of foolscap later on. The illustration I have given is a very plain and simple one; but in business matters unheard-of complications come up. The dealer is suddenly sold out; sometimes it seems advisable to take just a little liberty in substituting. He may decide, in order to get the order off before freezing weather comes, to put in a higher-priced potato at the price he received, rather than to fail in getting off the order complete. An explanation at the proper time would have made every thing pleasant and neighborly. Neglect to do so makes no end of jangles.

□ A good many of us are interested either in buying or selling potatoes for seed, or both; and some of us have more or less to do with the new potatoes that have commanded such high prices when they first came out. Now, where a man gets a high price for an article, say three or four times what potatoes are worth in the ordinary market, for eating purposes, under such circumstances we should expect, of course, he would give good measure. This, however, is not always the case. It would seem at first thought that one who is anxious to build up a trade of any kind would recognize the advantage of advertising his business by giving *good quality* *any good measure*. Some of the new potatoes are very large. Sometimes, besides this, they are long; and for this reason it is

difficult to get as many pounds into a barrel as where the potatoes were *all* either small or some of them small. But where the price is large, and the product large, it would seem as though the seller might be quite willing to purchase larger barrels. Sometimes he does not think of it. He should think of it, however. Not only the success of his business, and his good name that is involved, but other things come in here. A good many people are accused of preaching one thing and practicing another; and if we do not look out, we shall all of us be more or less guilty. There is a class of people, too, who, when they buy, demand the very fullest measure; but when they sell they give the smallest possible measure.

A little item has been going the rounds of the press, to the effect that a farmer's wife brought some butter to a grocer. Said he:

“Madam, I am sorry to say these rolls of butter do not weigh a pound. They are scant weight, every one of them.”

The dealer, however, was not so keen and bright this time as he thought he was. She slipped a package from under her shawl, and held it up.

“My dear sir, that butter was weighed out with a pound of starch bought of you at this grocery. Every roll of butter weighs exactly as much as the pound of starch, *paper and all*. Here it is, and you can try it.”

The woman might have added, in the language of our text, “With the same measure that ye mete withal, it shall be measured to you again;” but I can not learn that she did so.

In regard to barrels once more. Everybody who advertises produce by the barrel should, if he wants to build up a reputation, state how much the barrel contains. Suppose, however, he does not do this—he simply says so much per barrel; and when his customers complain that the barrels are scant, suppose he falls back on his printed prices, saying he didn't say the barrel held three bushels or even eleven pecks, or any thing about it. In one sense he could not be accused of cheating or unfairness; but public sentiment would be against him. There seems to be a general agreement or understanding that any thing that can be justly called a barrel should hold at least eleven pecks, or 165 lbs. I notice in some of the quotations in the papers that a barrel price is given, and then right under it another barrel price for a barrel of 180 lbs. This would be a three-bushel barrel of the old-fashioned kind. I remember of buying a barrel of cranberries; but when we came to retail them they were scant weight. I wrote to the dealer, and he said my order read just one barrel, but it did not say how much it should contain. Had I said I wanted a barrel of cranberries, “*flour-barrel* size,” I should have gotten one that held fully 100 quarts of cranberries. As I did not say so in making my order, I had no redress.

Now, friends, this way of doing business may be all right according to law, but it is not right according to “gospel.” A man who is a professor of religion, and who claims to gauge his life, business, and every thing else by the standard of Christ Jesus, should be ashamed of any such logic. If such a transaction as this should be made by any of his clerks, he should, as soon as he finds it out, make it good whether he loses or gains financially. He should recognize that every thing of this kind tends to dishonor more or less our Lord and Savior Jesus Christ; and this should be of more importance than every thing else in the world besides. Saving property or money, or coming out whole in a transaction of dollars and cents, should sink into insignificance compared with

holding up the standard of the Christian religion. But we do *not* lose by shunning "even the appearance of evil." These little transactions or little inconsistencies tell in a way that no one can comprehend. They tell away off into the future; and when a man once gets a reputation for doing not only all he agrees to do, but all that might be reasonably implied, it is worth more to him than money in the bank; it is worth more than the backing of influential friends; it is worth more than to be a *millionaire*, for it is something that endures through time and eternity.

Perhaps we need such lessons often to help us remember the golden rule. Years ago I decided that it is an excellent thing to be very careful of one's promises; but after having made a promise, either verbal, written, or printed, either in private or public, once having made a promise or agreement, be very sure to do *all* you promise, and, as a rule, just a little more, in order to shun even the appearance of evil.



BATTLE CREEK, MICH.

I was greatly interested, as you may know, in going through the hospital—an immense building which stands near the sanitarium. I can not begin to tell you about all I saw there, but I will mention some things. One room, for instance, is devoted to glass bottles and globes containing tumors that have been removed by surgical operations during years past. There are hundreds of them. They are from the size of an egg up to that of a bushel basket. A complete history of each case was kept on file for reference. I asked my guide, Will K. Kellogg, a brother of the doctor, if errors in diet were probably the cause of the tumors that are becoming so alarmingly prevalent.

"To a certain extent, Mr. Root; but errors in dress are a far larger factor, without question, in producing tumors."

"Errors in dress!" said I. "Do you mean tight lacing?"

"Yes, and that same fashion of cramping the body in other ways. The reason why tumors are more prevalent among women is probably because they are more apt to cramp themselves by their clothing."

Dear friends, does not the above indicate a terrible state of affairs in such an enlightened nation as ours?

Dr. J. H. Kellogg, of Battle Creek, is probably one of the foremost surgeons in the world; at least, so far as I know, he is generally accorded that credit. As my visit happened to be on the regular operating-day, I was, by the courtesy of friends Keck and Kellogg, invited to be present during one of the most critical and difficult operations. Adjoining the operating-room was a little room called the chapel. Here the surgeons, together with the nurses and students, all meet for a brief season of prayer before undertaking any operation that may have a fatal termination. As I looked into that little room I could not but breathe a prayer that the time might come when every surgeon and every physician in our land, who takes human life, as it were, in the hollow of his hand, could have the spirit in his heart of asking the great God above to give him wisdom and guidance.

The room prepared specially for surgical operations is lighted by skylights from above, so that every facility that the best and strongest light can furnish is at hand. There were three or four surgeons present, and perhaps half a dozen nurses, belonging to the hospital, and I was at once struck by the intelligent and cheerful appearance of the nurses.

The subject to be operated upon was a woman. What could be more fitting than that gentle Christian women should be all round about her to assist in every way they could, not only in sympathy, but in kind womanly attentions and touches? Just above the operating table was a little gallery for the use of medical students. All the nurses, all the doctors, all the students, were covered with a white robe or gown. These gowns enveloped the whole body, even to the feet and head. Their office is to protect the patient from any microbes or bacteria that might accidentally be brought in on the clothing of some one present. Your humble servant found a place among the medical students, enveloped in his robe like the rest. At my elbow was a shorthand writer to take down every particular in regard to the case, and to note every word, explanation, and direction given by Dr. Kellogg, the operator.

The patient was suffering from a diseased kidney. She had been operated upon before; but in order to save her life it was now deemed best to remove the diseased member entirely. Hot water or boiling water was used everywhere as a precaution against blood-poisoning. The knives and all the instruments were thoroughly cleansed with boiling water. Perhaps it may be news to some of you, that, unless this great and extreme care is exercised in cutting into the human body, the surgeon may do more harm than he does good. The medical fraternity at Battle Creek understand these things probably as well as anybody in the world, for they have a corps of expert microscopists, entomologists, and expert scientists in every thing pertaining to bacteria and fungoid growths. Great quantities of lukewarm water were first used to wash out the diseased portion of the body. The patient was given chloroform by means of a delicate apparatus that was new to me. Dr. Kellogg proceeded very slowly and cautiously. At first he gave us a little running talk by way of explanation; but when the discovery was made that the diseased kidney was entirely enveloped and covered up by growths of tissue and fat, then he finally explained to us that it was a very difficult and dangerous case.

In cutting away this abnormal growth, the blood came more and more, for it was interlaced with blood-vessels. The attendant nurses supplied lint and bandages to take up the blood, and the warm water was applied almost incessantly to wash away the blood so the doctor could see where the point of his lancet was penetrating. He explained to us that one little cut too far or in the wrong direction would be almost surely fatal. Never before in my life did I feel so intensely that these things are all in God's hands after all; that in spite of all the wonderful skill that has been achieved in the practice of surgery, God still holds the slender thread of life in his own hand. I know that they prayed in their little chapel before the work began; but my praying was done (and it was done in real earnest too) while it seemed—at least to me—a question whether the patient could ever survive. Finally, during the most critical portion of the operation, the chloroform seemed hardly adequate. The patient shut her teeth, and there seemed danger that she might choke. I do not know whether

lockjaw sets in at such times or not; but I *for one* feared it.

One of the bright nurses, however, was right at hand with an apparatus for forcing open the jaws. Then another delicate instrument was brought into requisition, and fastened to the tongue to hold it away so it might not close the opening of the windpipe. During all this time the chloroform was necessarily suspended, and the patient began to suffer terribly. It always troubles me when I can not help in a crisis of this kind, especially, where human life is in peril. Thank God, there was *one* thing I *could* do right then and there. Perhaps I should explain right here that I was told I must not speak nor make any sort of noise, for medical students are often dismissed in a body for failing to keep perfectly silent during a critical case like that. The only way in which I could help was by silent prayer. The quantity of blood that flowed, it seemed to my weak and inexperienced eyes, was enough to kill anybody, and I had about given up all hope, although I still prayed mentally, even if it was with but little faith. A fragment of that little hymn—

I am weak, but thou art mighty;

kept coming into my mind. Slowly and carefully the doctor worked. One attachment after another was sundered by the keen steel blade. Sometimes it seemed as if the operator meditated a little before cutting away something that seemed to be in the way. After a long time, as it would seem to me, he finally reached the connection that attaches the kidney to the body. Here he was obliged to stop in order to take a bit of cord, held right ready to his hand, before he had had even time to ask for it, by one of the nurses, and the necessary knot was formed before severing the organ.

Let me say right here that it seemed wonderful the way that his nurses, without a word being spoken, kept holding every appliance for the operation, as one thing after another was needed. Sometimes it was water, given through a small rubber tube; sometimes it was lint or bandages, then it was, every little while, some new surgical instrument for holding the skin, the flesh, and different organs out of the way of the operator. I did not notice the time when the operation commenced. It seemed to me as if it must have occupied toward an hour.

I was to leave on the train at three o'clock. Friend Keck silently moved out, for he was close to the door. I gathered from this that it was about time for me to take my train; but so intensely interested was I that I took the chances of waiting a few minutes longer. I did not see the kidney entirely removed, for it was a very slow and careful operation; but I stood until I was sure the terrible ordeal was almost over; I asked friend Keck to write me the result; but, to confess the truth, I had decided in my own mind it was next to impossible for a human being to live after being taken to pieces and overhauled in that manner; but, of course, I know very little about such things. Almost as soon as I got home, the cheering news came that the patient had rallied and was doing nicely. A little later she bid fair to not only recover, but to recover quickly. Within a week or ten days, if I remember correctly, she was able to sit up; and now she is pronounced almost if not quite out of danger.

By way of conclusion I want to say just a word in regard to the physicians and surgeons of this sanitarium. I feel quite certain that not one of the eminent doctors present at that time was ever guilty of the use of strong drink, or even of using tobacco. They were men whose faith is in God, and who are daily seek-

ing his kingdom and righteousness. The time was when our ministers used to enter the pulpit, saturated with tobacco, and sometimes with something worse. At the present time, however, such things may be tolerated in some of the aged members of the ministerial fraternity, but very rarely among the younger ones. I wonder if the time is not also near at hand, when people will demand for a *family physician* one who has no smell of tobacco about his person, and one who is *pronounced and decided* in regard to the use of spirituous liquors. God speed the day!



TURNIPS AND CRIMSON CLOVER.

We are now gathering and selling some of the handsomest turnips we ever raised in the world, and they cost us almost nothing except the seed. It comes about in this way: When we were cultivating our Corey corn the last time, we sowed crimson-clover seed among the corn, as I have told you. Well, we mixed in about an ounce of turnip seed with 5 lbs. of clover. We wanted to have the turnips so far apart that they would not crowd the clover nor crowd each other, and we hit it to a dot. After the ears got too hard for marketing we just pulled up the corn by the roots, knocked the dirt off against the wagon-wheel, and fed it to the horses and pigs. The ground was cultivated with a fine-tooth Planet once after sowing the seed. We have now a very even stand of large nice crisp turnips; and the crimson clover between the turnips is making great rank dark-green clumps of clover. They are stooling out considerably this fall. The plants lie closer to the ground than ordinary clovers; and I feel sure that, on this account, they are going to stand the winter, especially with the growth they have made.

Right adjoining the Corey corn was a strip of Mammoth Evergreen; but the clover and turnips did comparatively little among that great rank-growing corn full of life and energy. I suppose one reason was, there was so little rain there was not moisture enough to go round, and the corn had possession of the ground in the first place, and naturally resented the intrusion. This corn was saved for seed—at least, a large part of it, so it was considerably later before the corn was cleared off, leaving the turnips and crimson clover to have the whole of the ground. There are a few turnips and some clover that I do not think will amount to much.

Now, in managing in this way, especially where we are going to have a very dry season, clover and turnips had better be put in with some crop that is going to get out of the way pretty early. We sowed some turnips and clover in the same way among our beans; and although this was put in a week later, we have a very good stand of clover and turnips both, because the beans are not so tall, and they were pretty well along toward maturity when clover was put in. By referring to GLEANINGS for Aug. 1, page 605, I see that we did the greater part of our turnip and clover seeding on the 29th of July. We sowed White Egg turnips, Purple-top Globe, and Yellow Aberdeen; and all of them have done splendidly except where they were in the rank strong-

growings corn, as I have told you. Just before Thanksgiving we expect to pull all the turnips, then the clover has "undisputed sway."

NEW VEGETABLES AND PLANTS TESTED DURING 1895.

Our friends will remember that GLEANINGS had considerable to say about the lathyrus silvestris, or flat pea. Well, it has not stood the drouth of the past season as I expected to see it do. Perhaps our hard clay soils are not just the thing for it. It stood the severe winter all right, and furnished a great amount of feed until the severe dry weather set in. I do not think its roots have gone the great distance claimed for it—not at this stage of growth, any way. So far as we have tried it to feed stock, they all seem to take it readily. Our experiments were mostly made in the spring. Bert Cook, when he was with us, said that, so far as he could find out, it was a success in Michigan at the Agricultural College, so far as producing feed was concerned, but no kind of stock seemed to be very fond of it, and he thought it was going to be a failure in that respect. Sacaline, though it grew up perhaps three feet high, and then produced quite a quantity of cream-colored blossoms, has not as yet had sufficient foliage to make any test of it for feed; but very likely it is getting root so as to make a show another year. At present writing it would seem that neither of these plants is going to be exactly what has been claimed for them.

The bush yam, or vineless sweet potato, that was growing so handsomely, made a fine show of tops, but no potatoes of any account, on our soil; but for that matter we never have had a good yield of sweet potatoes, or yams either, on our ground. Yes, we did have some very good-sized yams, but they were not dry and mealy like the sweet potatoes we get from Baltimore. We tried selling them around town; but all of our customers voted the home-grown were not as good as those shipped in from other localities.

Best of All beans I have reported on before. There seems to be no fault coming out with regard to these; but they are not particularly new.

We have tested several kinds of sweet corn, but do not find any of them enough better than we have, to give them a place in our new catalog.

The Sweetheart melon, mentioned in August, we have thought worthy of a place.

Burpee's Fordhook tomato will also be cataloged for 1896.

We are testing the Marshall strawberry, and think quite likely we shall give it a place in our catalog next July. We have at present, however, no plants for sale.

The Gault raspberry has already received sufficient notice. We think it has come to stay.

On page 499 we copied at length from the *Rural New-Yorker* in regard to Electropoise, and the editor there agreed to test the thing for a period of several weeks. He has done so, and here is his report:

Some months ago the *The R. N.-Y.* gave its opinion of the Electropoise, a device for which extravagant curative properties are claimed. The people who sell this contrivance promised, as proof of the value of their "Poise," to cure a person who has been an invalid for some years. That person tried the device carefully for two months according to the directions of the company's physician. He was to have tried it three months, but after two months' trial he was taken with a serious illness! His opinion of the Electropoise, after the two months' trial, is that, as a remedial agent, it exerts no effect whatever.

Books for Bee-Keepers and others.

Any of these books on which postage is not given will be forwarded by mail, postpaid, on receipt of price.

In buying books, as every thing else, we are liable to disappointment if we make a purchase without seeing the article. Admitting that the bookseller could read all the books he offers, as he has them for sale, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. I very much desire that those who favor me with their patronage shall not be disappointed, and therefore I am going to try to prevent it by mentioning all the faults, so far as I can, that the purchaser may know what he is getting. In the following list, books that I approve I have marked with a book. I especially approve those that are not up to times; †; books that contain but little matter for the price, large type, and much space between the lines; †; foreign. § The bee-books are all good.

BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You all know, that you can judge of the size of the books very well by the amount required for postage on each.

8	Bible, good print, neatly bound.....	20
10	Bunyan's Pilgrim's Progress**.....	30
20	Illustrated Pilgrim's Progress**.....	75
This is a large book of 425 pages and 175 illustrations, and would usually be called a \$2.00 book. A splendid book to present to children. Sold in gilt edge for 25c more.		
6	First Steps for Little Feet. By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can hardly be found a more attractive book. Beautifully bound, and fully illustrated. Price 50¢. Two copies will be sold for 75 cents. Postage six cents each.	
5	Harmony of the Gospels.....	35
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